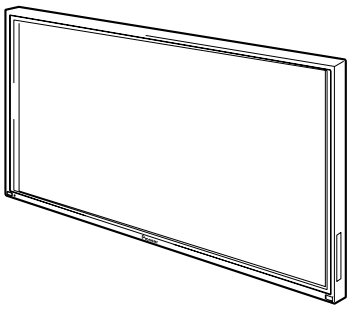
Service Manual



The service manual ARP3080 was revised in October, 2000. Please use this revised edition instead of the 1st one.

ORDER NO.
ARP3080

PLASMA DISPLAY

PDP-505HD

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

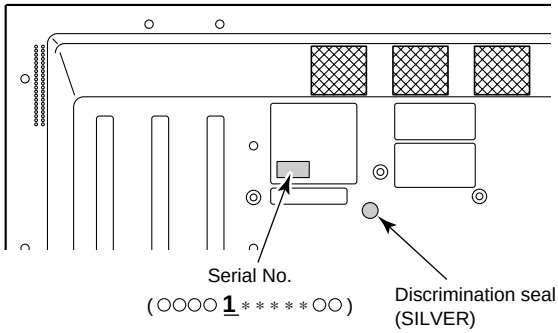
Type	Model	Power Requirement	Remarks
	PDP-505HD		
KUC/1	○	AC120V	

● This service manual should be used together with the following manual(s).

Model No.	Order No.	Remarks
PDP-502MX	ARP3078	SCHEMATIC DIAGRAM, PCB DIAGRAM and IC INFORMATION

● **In PDP-505HD, there are two different models (original model and value analysis model). Confirm the mark and serial No. of the product rear side, and use each service manual.**

■ PRODUCT REAR SIDE



■ SERIAL NO.

Serial No.	Service Manual
○○○○1＊＊＊＊＊○○	ARP3080 [This manual]
	ARP3078 (PDP-502MX)
OTHER	ARP3043
	ARP3044 (PDP-502MX)

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1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

1.1 SAFETY PRECAUTIONS

NOTICE : Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis.
The following precautions should be observed :

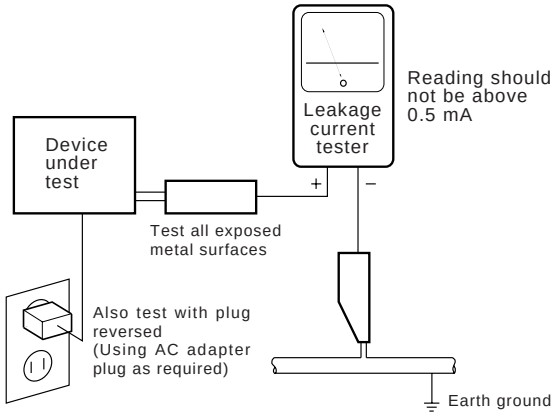
1. When service is required, even though the PDP UNIT an isolation transformer should be inserted between the power line and the set in safety before any service is performed.
2. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
3. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
4. Always use the manufacture's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's.
   Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacture has become defective, or inadvertently defeated during servicing. Therefore, the following checks should be performed for the continued protection of the customer and service technician.
6. Perform the following precautions against unwanted radiation and rise in internal temperature.
   - Always return the internal wiring to the original styling.
   - Attach parts (Ground, Rear Cover, Shield Case) surely after disassembly.
7. Perform the following precautions for the PDP panel.
   - When the front case is removed, make sure nothing hits the panel face, panel corner, and panel edge (so that the glass does not break).
   - Make sure that the panel vent does not break. (Check that the cover is attached.)
   - Handle the FPC connected to the panel carefully.
     Twisting or pulling the FPC when connecting it to the connector will cause it to peel off from the panel.
8. Pay attention to the following.
   - Be sure to wire the fan. If the fan does not work, the temperature will rise and cause the protection circuit to operate.
   - When the front case is removed, infrared ray is radiated and may disturb reception of the remote control unit.
   - Pay extreme caution when the front case and rear panel are removed because this may cause a high risk of disturbance to TVs and radios in the surrounding.

Leakage Current Cold Check

With the AC plug removed from an AC power source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of 0.3MΩ and a maximum resistor reading of 5MΩ. Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into an AC power source (do not use an isolation transformer for this check).
Turn the AC power switch on.
Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.

1.2 PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire or other hazards.
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

1.3 CHARGED SECTION AND HIGH VOLTAGE GENERATING POINT

■ Charged Section

The places where the commercial AC power is used without passing through the power supply transformer.
If the places are touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. Therefore, be sure to connect the set via an insulated transformer and supply the current.

■ Charged Section (Power supply primary side)

1. AC Power Cord
2. AC Inlet with Filter
3. Power Switch (S1)
4. Fuse (In the MAIN POWER ASSY)
5. STB Transformer and Converter Transformer (In the MAIN POWER ASSY)
6. Other primary side of the MAIN POWER ASSY

■ High Voltage Generating Point

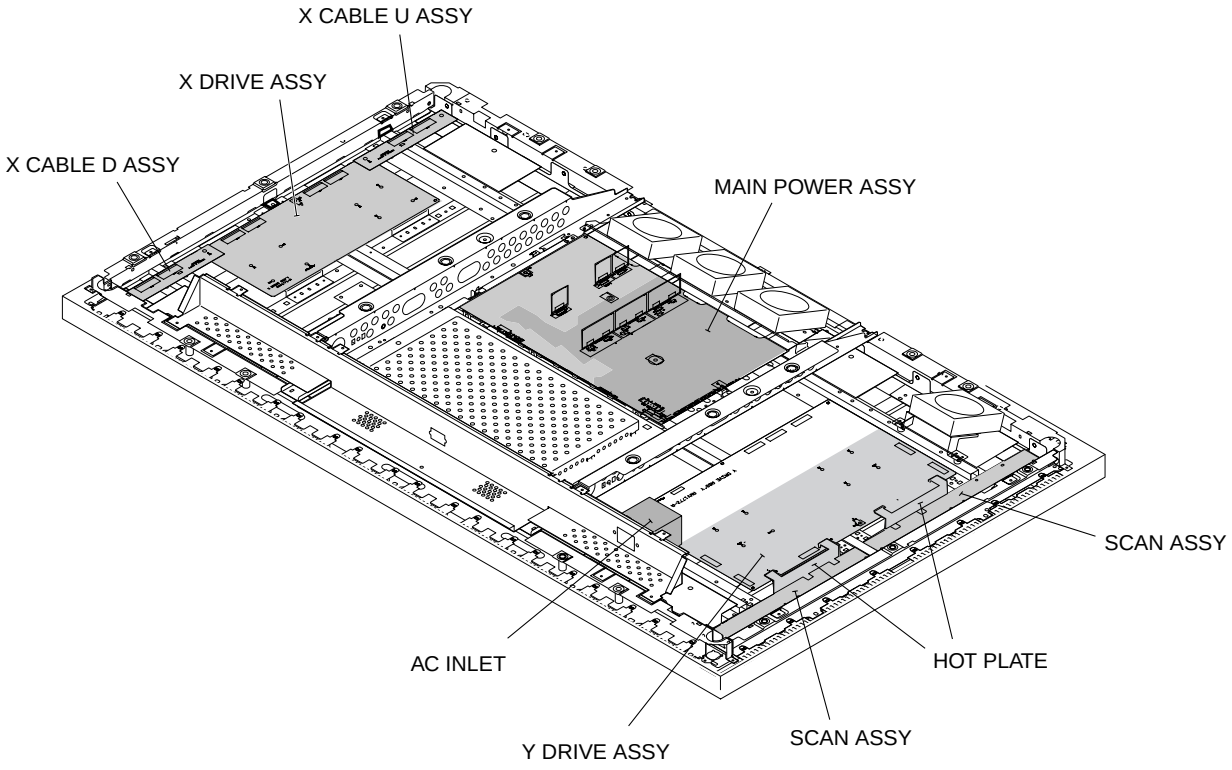
The places where voltage is 100V or more except for the charged places described above. If the places are touched, there is a risk of electric shock.

1. POWER SUPPLY MODULE	(170V)
2. X DRIVE ASSY	(170V)
3. Y DRIVE ASSY	(–200V to 250V)
4. SCAN ASSY	(250V)

For the places, refer to the EXPLODED VIEWS, the SCHEMATIC DIAGRAM and the PCB CONNECTION DIAGRAM sections.

Part is charged section.

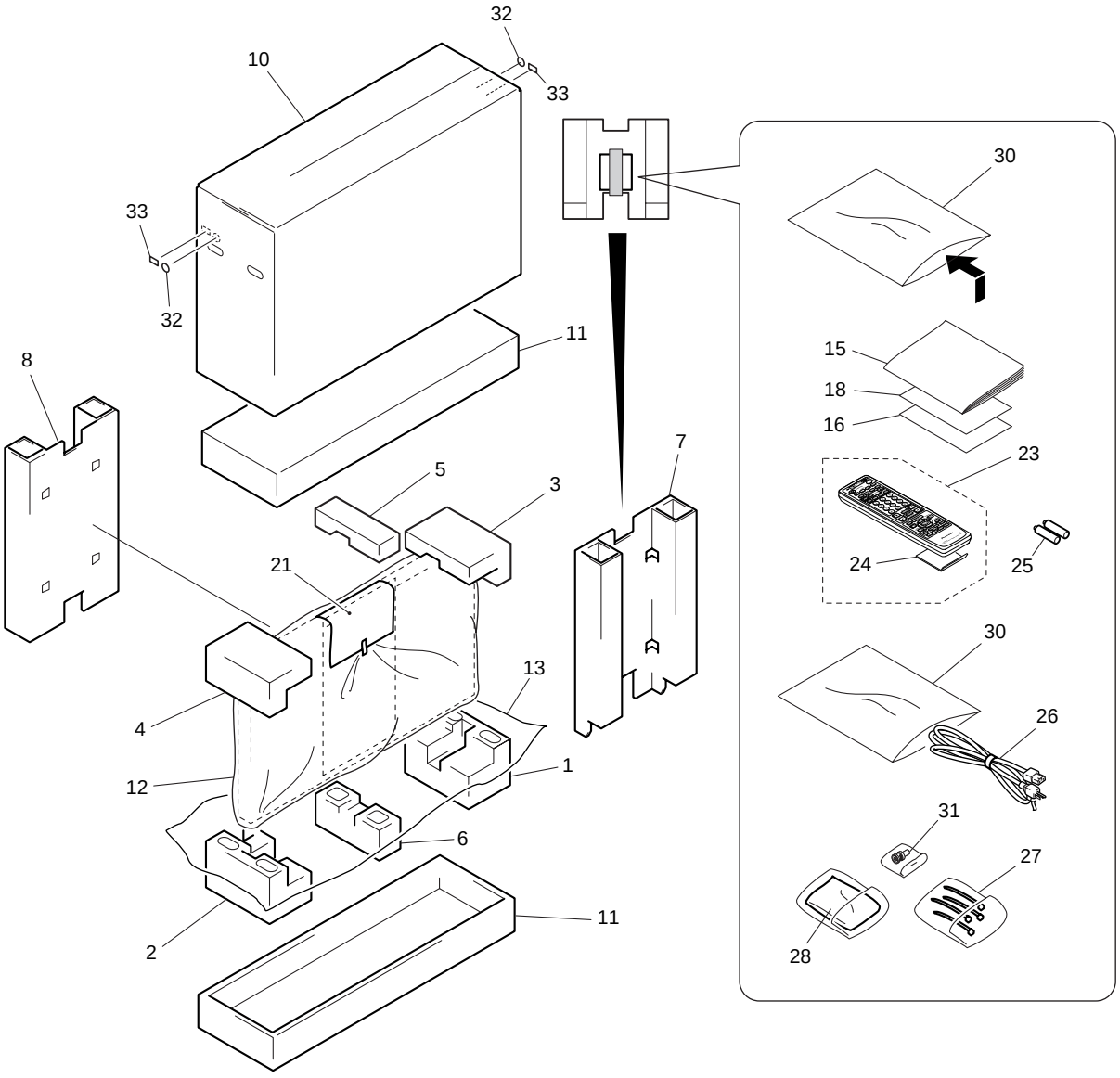
Part is the high voltage generating points other than the charged section.



2. EXPLODED VIEWS AND PARTS LIST

NOTES :
- *Parts marked by " NSP " are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screw adjacent to ▼ mark on the product are used for disassembly.*

2.1 PACKING



■ PACKING PARTS LIST

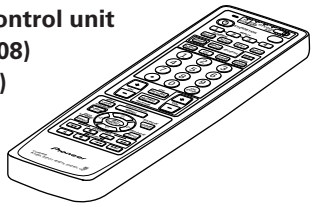
Mark	No.	Description	Part No.
	1	Under Pad R	AHA2239
	2	Under Pad L	AHA2240
	3	Upper Pad R	AHA2241
	4	Upper Pad L	AHA2242
	5	Upper Pad C	AHA2243
	6	Under Pad C	AHA2245
	7	Front Carton	AHB1210
	8	Rear Carton	AHB1211
	9	……	
	10	Upper Carton	AHD3044
	11	Under Carton	AHD3037
	12	Mirror Mat	AHG1284
	13	Polyethirene Sheet	AHG1302
	14	……	
	15	Operating Instructions (English/French)	ARE1349
	16	Plasma Caution Sheet	ARM1145
	17	……	
	18	Caution Sheet	ARM1168
	19	……	
	20	……	
NSP	21	Warranty	ARY1094
	22	……	
	23	Remote Control Unit (CU-PDP008)	AXD1447
	24	Battery Cover	AZN2401
NSP	25	AA (LR6) Batteries	VEM1021
⚠	26	Power Cord	ADG1178
	27	Binder Assy	AEC1758
	28	Cleaning Cloth	AED1174
	29	……	
NSP	30	Literature Bag	AHG–117
	31	Pin/BNC Conversion Adaptor	AKX1052
	32	Seal (SILVER)	AAX2817
NSP	33	Label	VRW1629
	34	Pad Set	AHA2269

Pad set (AHA2269) is composed of the following parts.

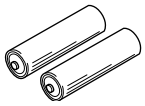
34		Pad Set	AHA2269
	1	Under Pad R	AHA2239
	2	Under Pad L	AHA2240
	3	Upper Pad R	AHA2241
	4	Upper Pad L	AHA2242
	5	Upper Pad C	AHA2243
	6	Under Pad C	AHA2245

Accessories

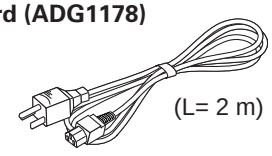
Remote control unit (CU-PDP008) (AXD1447)



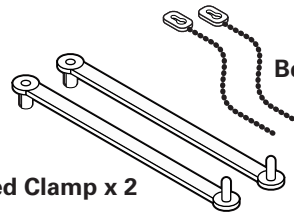
AA (LR6) batteries x 2



Power cord (ADG1178)



Binder assy (AEC1758)

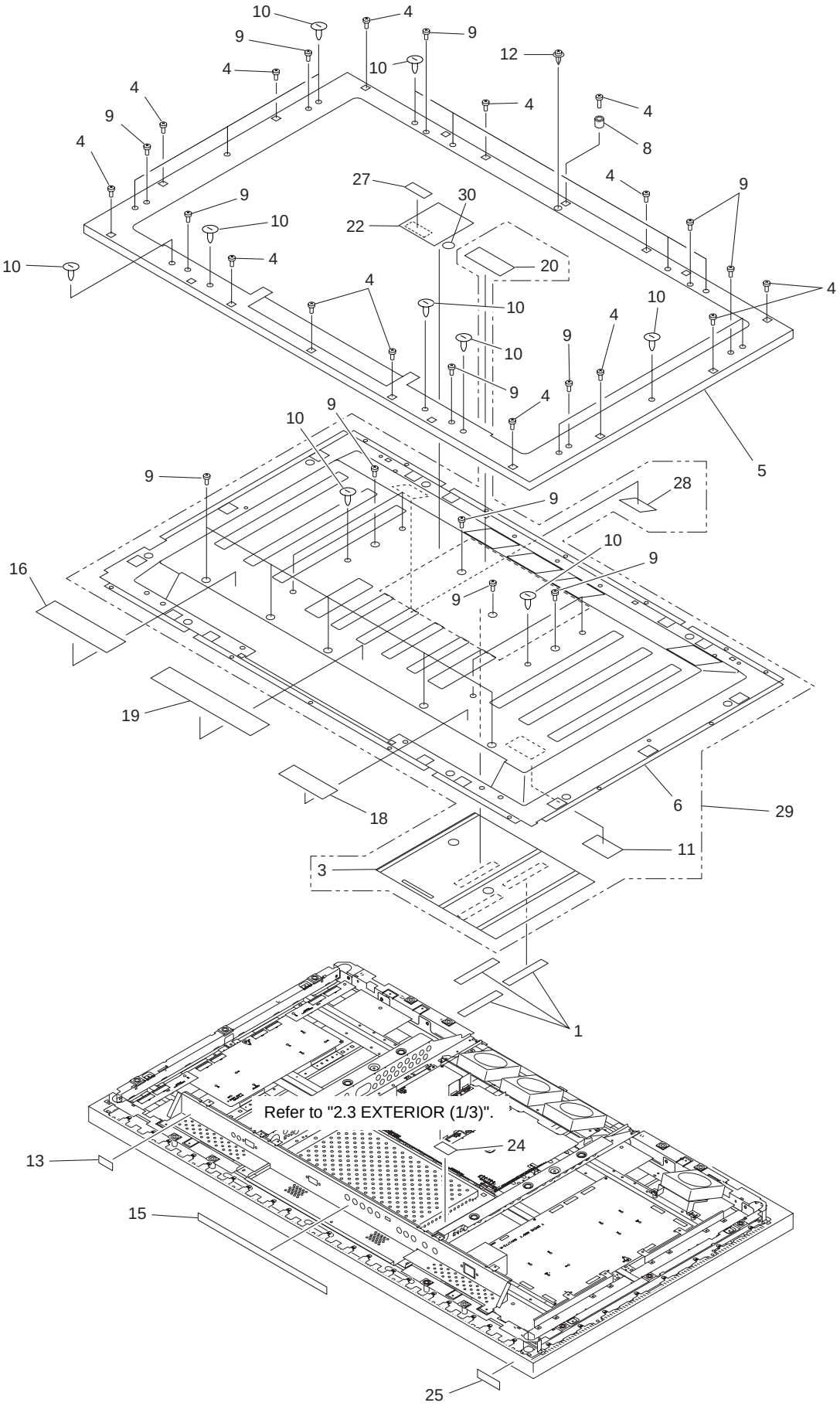


Pin/BNC conversion adaptor x 1 (AKX1052)

Cleaning cloth (AED1174)

- **Operating Instructions (ARE1349)**
- **Warranty**

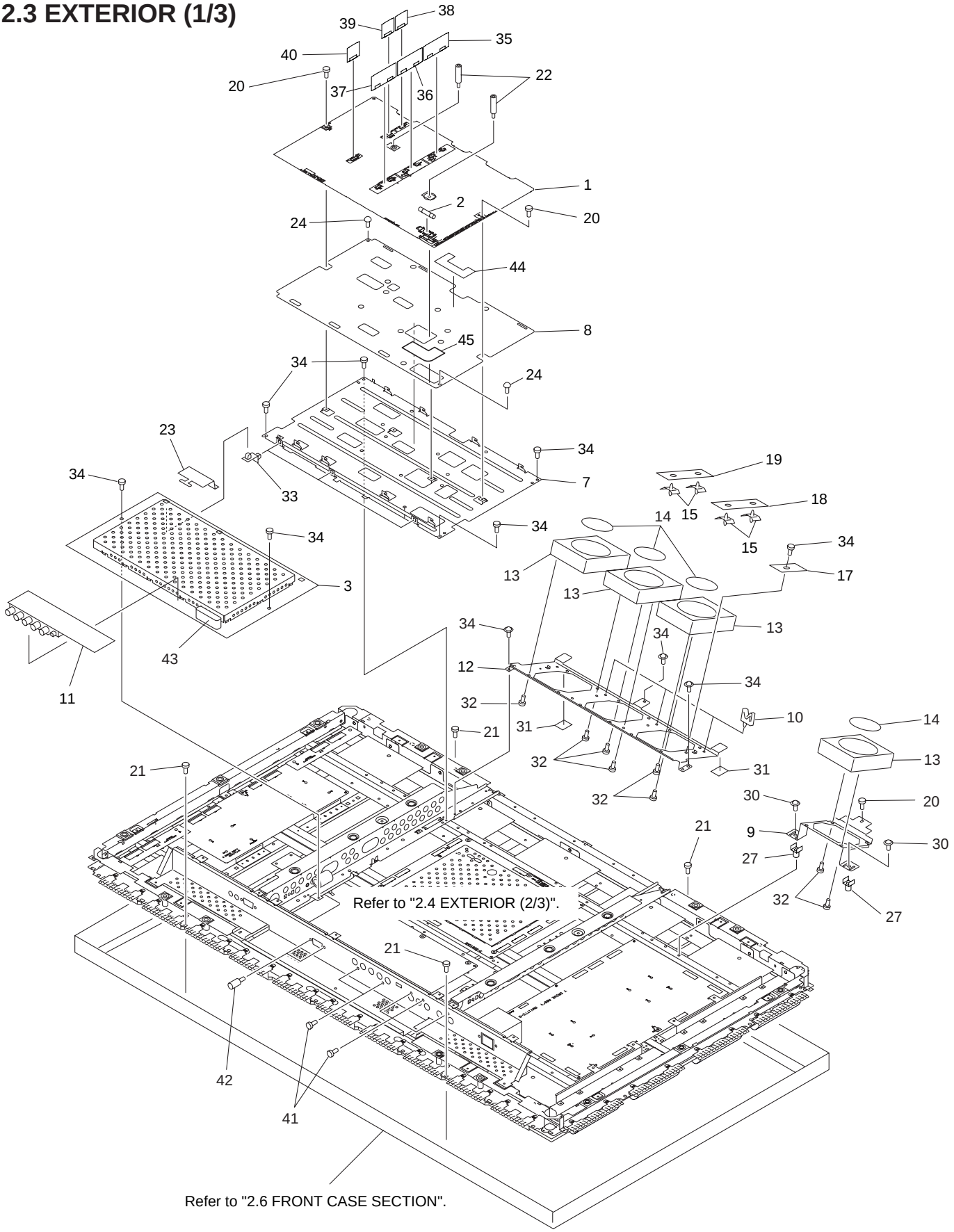
2.2 REAR CASE SECTION



■ REAR CASE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Siricon Sheet L	AEH1034
	2	……	
	3	Barrier	AMR3166
	4	Screw	BBZ40P160FZK
NSP	5	Rear Case Frame	AMR3170
NSP	6	Rear Case	ANE1579
	7	……	
	8	Screw Collar	AEC1848
	9	Screw	AMZ30P100FZK
	10	Hole Rivet	AMR2969
	11	Solder Warning Label	AAX2644
	12	Screw Rivet	AEC1852
	13	Terminal Label S	AAX2740
	14	……	
	15	Terminal Label T	AAX2741
	16	Terminal Label P	AAX2737
	17	……	
	18	Terminal Label R	AAX2739
	19	Terminal Label Q	AAX2738
	20	Bolt Caution Label	AAX2728
	21	……	
	22	Name Label	AAL2312
	23	……	
NSP	24	Earth Label	BAX1014
	25	Serial Seal	AAX2609
	26	……	
NSP	27	Label	VRW1629
	28	Barrier Caution Label	AAX2759
	29	Rear Case Service Assy	AWL1455
	30	Seal	AAX2816

2.3 EXTERIOR (1/3)

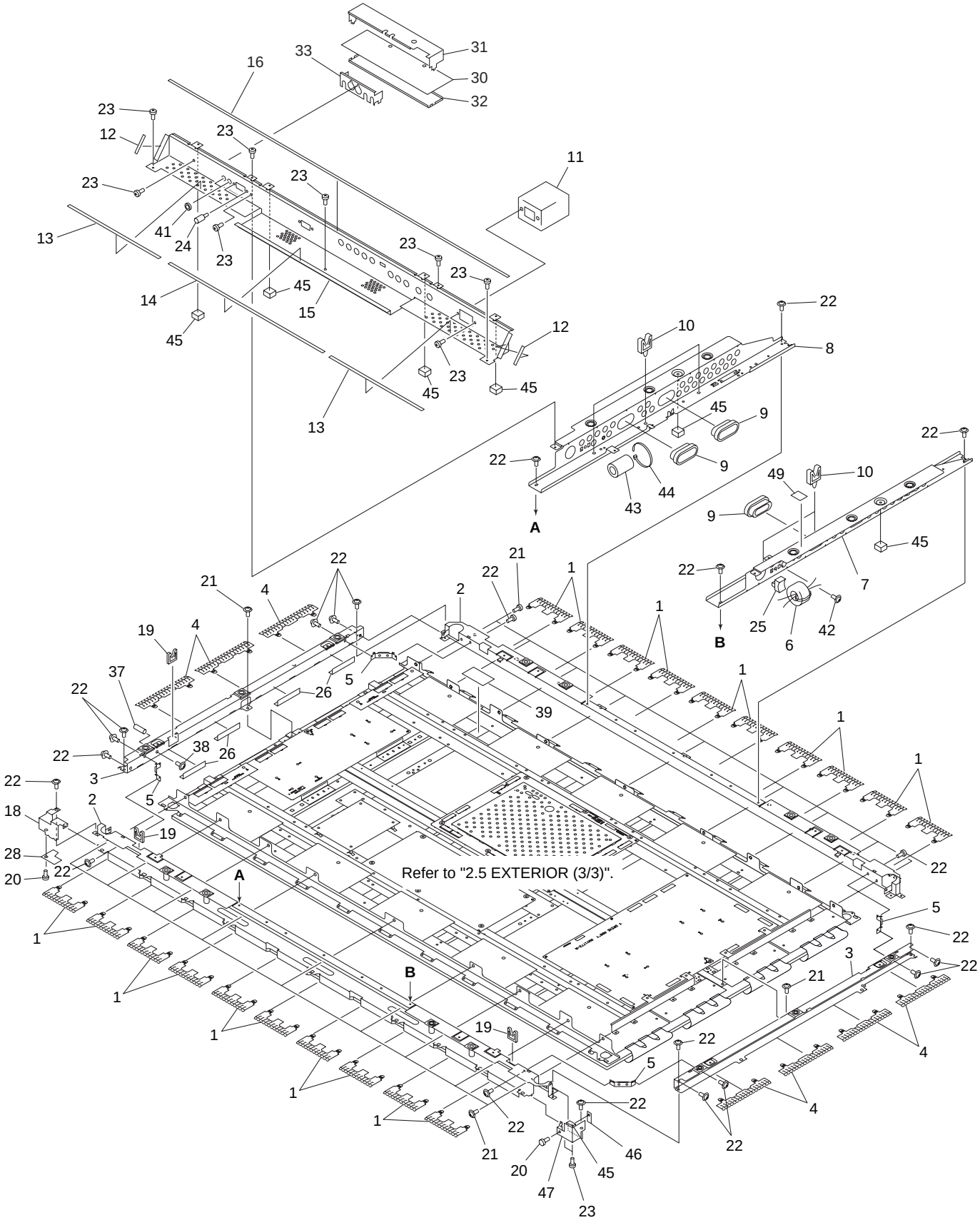


■ EXTERIOR (1/3) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	MAIN POWER ASSY	AWZ6506
⚠	2	Fuse (10A, FU101)	AEK1071
	3	VIDEO ASSY	AWZ6539
	4	……	
	5	……	
	6	……	
NSP	7	Chassis	ANA1605
	8	Insulating Sheet	AMR3199
	9	Fan Frame A	ANG2330
	10	Wire Saddle	AEC1745
	11	INPUT ASSY	AWZ6540
NSP	12	Fan Frame C	ANG2393
	13	Fan Motor	AXM1036
	14	Fan Label	AAX2785
	15	Locking Card Spacer	AEC1736
	16	……	
	17	SENSOR (A) ASSY	AWZ6501
	18	FAN CABLE (A) ASSY	AWZ6502
	19	FAN CABLE (B) ASSY	AWZ6497
	20	Screw	BMZ30P060FCU
	21	Screw	BBZ40P160FZK
	22	Spacer Screw	AEF1028
	23	Wire Barrier	AMR3209
	24	Nylon Rivet	AEC1671
	25	……	
	26	……	
	27	PCB Mold	AMR2115
	28	……	
	29	……	
	30	Screw	ABZ30P140FMC

Mark	No.	Description	Part No.
	31	Fan Angle Cushion	AED1193
	32	Screw	PPZ50P100FZK
	33	PCB Hinge	AEC1807
	34	Screw	AMZ30P060FMC
	35	RCC CONTROL (A) ASSY	AWZ6507
	36	RCC CONTROL (B) ASSY	AWZ6508
	37	RCC CONTROL (C) ASSY	AWZ6509
	38	OTL CONTROL (A) ASSY	AWZ6510
	39	OTL CONTROL (B) ASSY	AWZ6411
	40	OTL CONTROL (C) ASSY	AWZ6412
	41	Screw	BPZ30P080FZK
	42	Hexagon Screw	BBA1051
	43	Ferrite Core (L3)	ATX1038
	44	Insulation Sheet S	AMR3233
	45	Insulation Sheet L	AMR3234

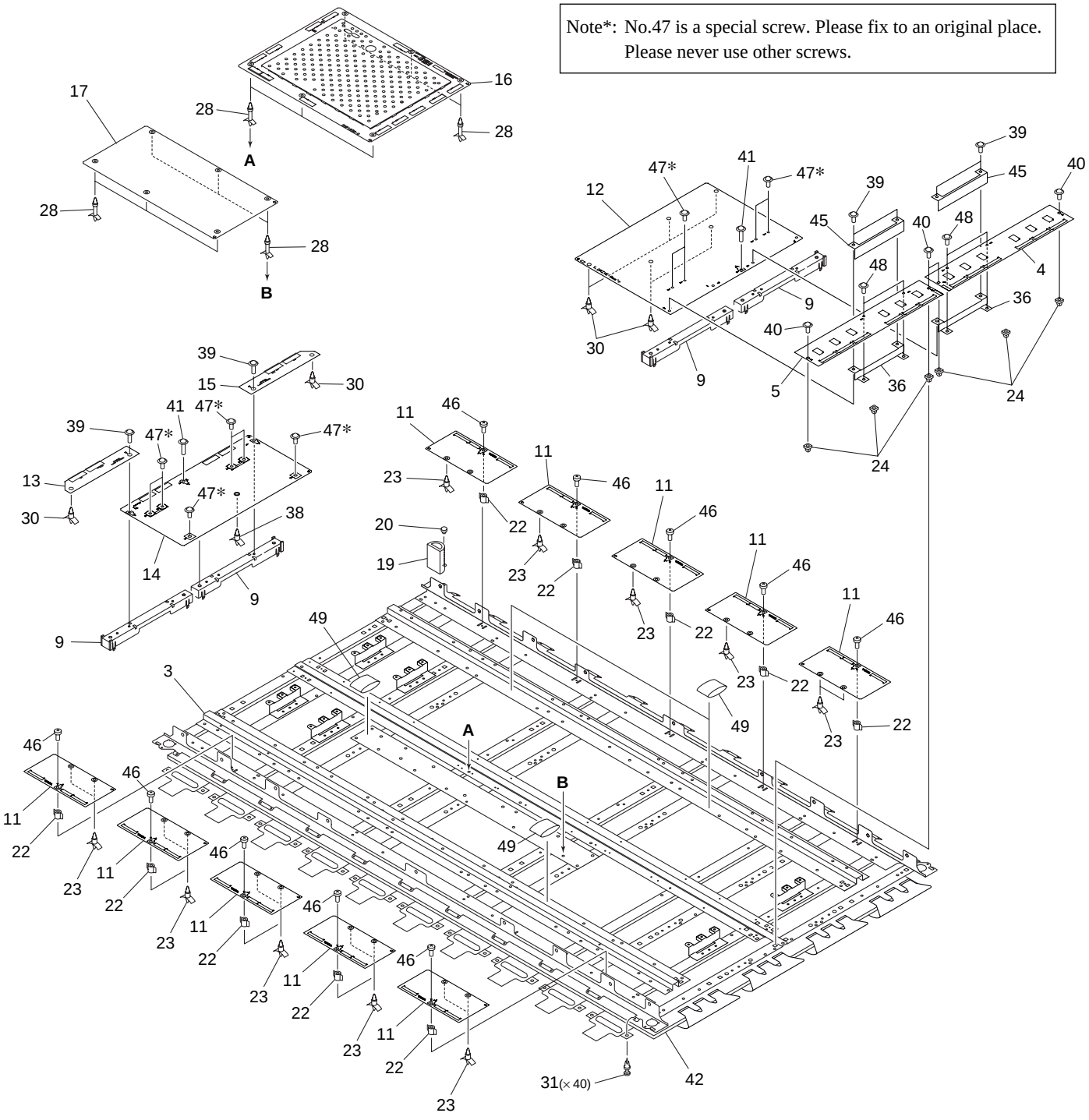
2.4 EXTERIOR (2/3)



■ EXTERIOR (2/3) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Frame Shield H	ANK1609
	2	Frame H	ANG2396
	3	Frame V	ANG2344
	4	Frame Shield V	ANK1610
	5	Corner Holder	ANG2347
	6	Ferrite Core (L1)	ATX1037
	7	Sub Frame R	ANG2395
	8	Sub Frame L	ANG2419
	9	Bush C	AEC1740
	10	Wire Saddle	AEC1745
⚠	11	AC Inlet with Filter (CN1)	AKP1210
	12	Shield Gasket B	ANK1646
	13	Shield Gasket D	ANK1614
	14	Shield Gasket C	ANK1647
	15	Terminal Panel	ANG2354
	16	Shield Gasket E	ANK1634
	17	……	
NSP	18	IR Holder	ANG2346
	19	Edging Saddle	AEC1737
	20	Nylon Rivet	AEC1671
	21	Screw	AMZ30P080FCU
	22	Screw	AMZ30P060FMC
	23	Screw	BMZ30P060FCU
	24	Hexagon Screw	BBA1051
	25	Ferrite Core Holder	AEC1818
	26	FPC Cushion	AEB1341
	27	……	
	28	IR RECEIVER ASSY	AWZ6498
	29	……	
	30	CONTROL ASSY	AWZ6544
NSP	31	Control Shield Case	ANK1626
NSP	32	Control Shield Cover	ANK1627
NSP	33	Control Shield Plate	ANG2380
	34	……	
	35	……	
	36	……	
	37	Spacer	AEC1847
	38	Screw	AMZ30P100FZK
NSP	39	Drive Voltage Label	ARW1097
	40	……	
	41	Nut	ABN1033
	42	Screw	PMB40P080FMC
	43	Ferrite Core (L2)	ATX1031
	44	Binder	AEC1851
⚠	45	Power Switch (S1)	ASG1082
	46	INDICATOR ASSY	AWZ6538
NSP	47	Switch Holder	ANG2345
	48	Dust Guard	AEB1362
NSP	49	Earth Label	BAX1014

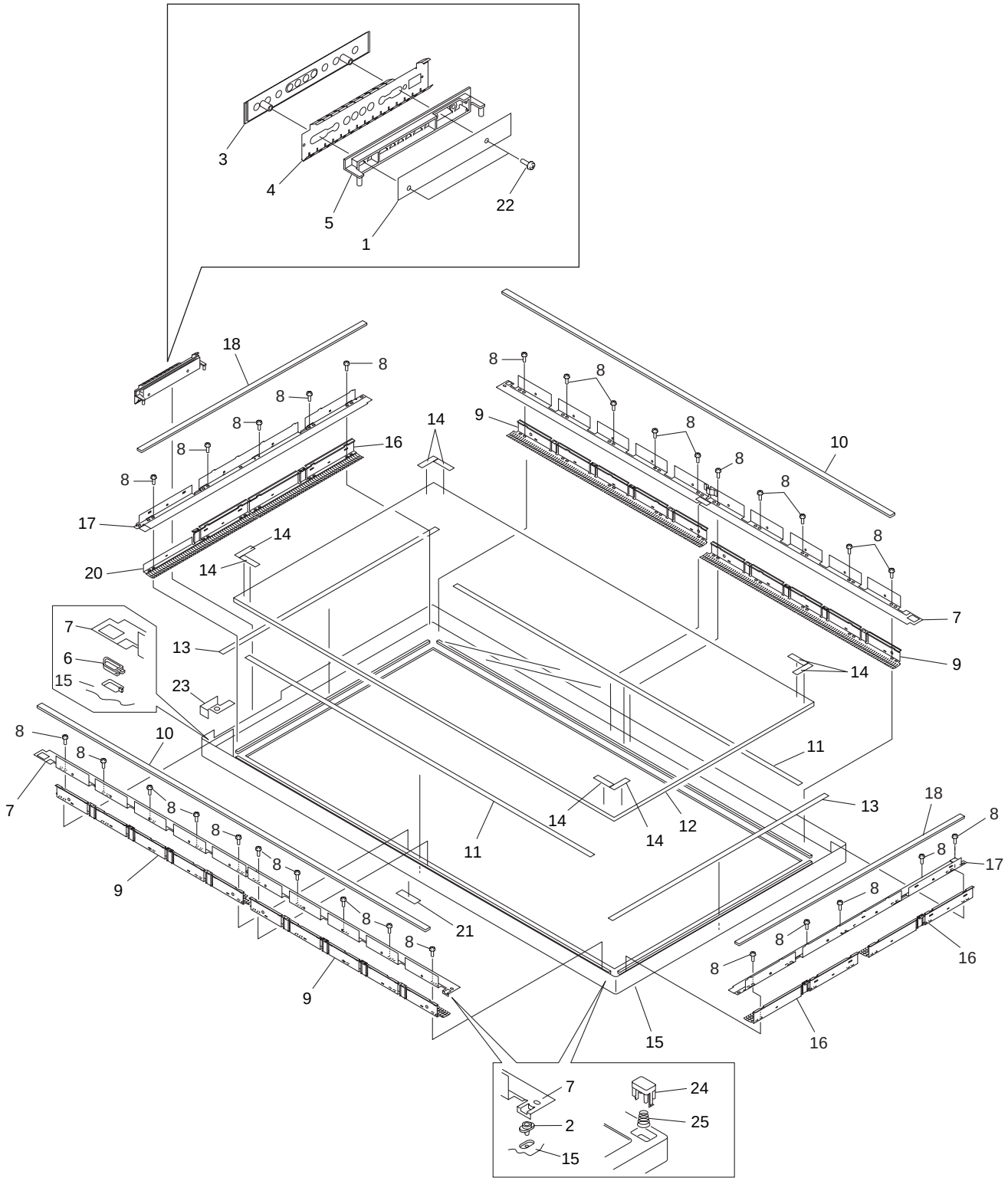
2.5 EXTERIOR (3/3)



■ EXTERIOR (3/3) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	……	
	2	……	
NSP	3	Frame Assy	ANA1646
	4	SCAN (A) ASSY	AWZ6518
	5	SCAN (B) ASSY	AWZ6519
	6	……	
	7	……	
	8	……	
	9	PCB Spacer	AMR3155
	10	……	
	11	CABLE ASSY	AWV1843
	12	Y DRIVE ASSY	AWV1847
	13	X CABLE D ASSY	AWZ6515
	14	X DRIVE ASSY	AWV1842
	15	X CABLE U ASSY	AWZ6514
	16	DIGITAL VIDEO ASSY	AWV1858
	17	U-COM ASSY	AWZ6542
	18	……	
NSP	19	Tube Cover	AMR3036
NSP	20	Push Rivet	AEC1748
	21	……	
	22	Dust Guard Collar	AMR3227
	23	Locking Spacer	AEC1794
	24	Screw Grommet	AEC1857
	25	……	
	26	……	
	27	……	
	28	Circuit Board Spacer	AEC1744
	29	……	
	30	Locking Spacer	AEC1796
	31	Plastic Rivet	AMR1066
	32	……	
	33	……	
	34	……	
	35	……	
NSP	36	Hot Plate	ANG2416
	37	……	
	38	Circuit Board Spacer	AEC1795
	39	Screw	ABZ30P160FCU
	40	Screw	BBZ40P120FZK
	41	Screw	IBZ30P250FCU
NSP	42	Plasma Panel Assy	AAV1236
	43	……	
	44	……	
	45	Hot Plate Barrier	AMR3223
	46	Screw	ABA1056
	47	Screw	ABA1200
	48	Screw	ABZ30P060FCU
	49	Ferrite Core (L4–L7)	ATX1041

2.6 FRONT CASE SECTION



■ FRONT CASE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	SIDE SWITCH ASSY	AWZ6543
	2	LED Lens	AAK2695
	3	Control Name Plate	AAK2758
	4	Control Shield	ANK1606
	5	Control Button	AAC1540
	6	Lens	AAK2741
NSP	7	Panel Holder Assy	ANG2386
	8	Screw	BPZ30P080FZK
	9	Panel Shield H	ANK1603
	10	Panel Cushion H	AED1189
	11	Front Cushion H	AED1191
	12	Protect Panel Assy	AMR3230
	13	Front Cushion V	AED1192
	14	Corner Cushion	AEB1360
	15	Front Case	AMB2678
	16	Panel Shield V	ANK1604
NSP	17	Panel Holder V	ANG2337
	18	Panel Cushion V	AED1190
	19	……	
NSP	20	Panel Shield VM	ANK1605
	21	Pioneer Badge	AAM1085
	22	Screw	BBZ30P080FMC
	23	……	
	24	Power Button	AAD4104
	25	Coil Spring	ABH1103
	26	Corner Shield	ANK1665

2.7 PDP SERVICE ASSY (AWU1032)

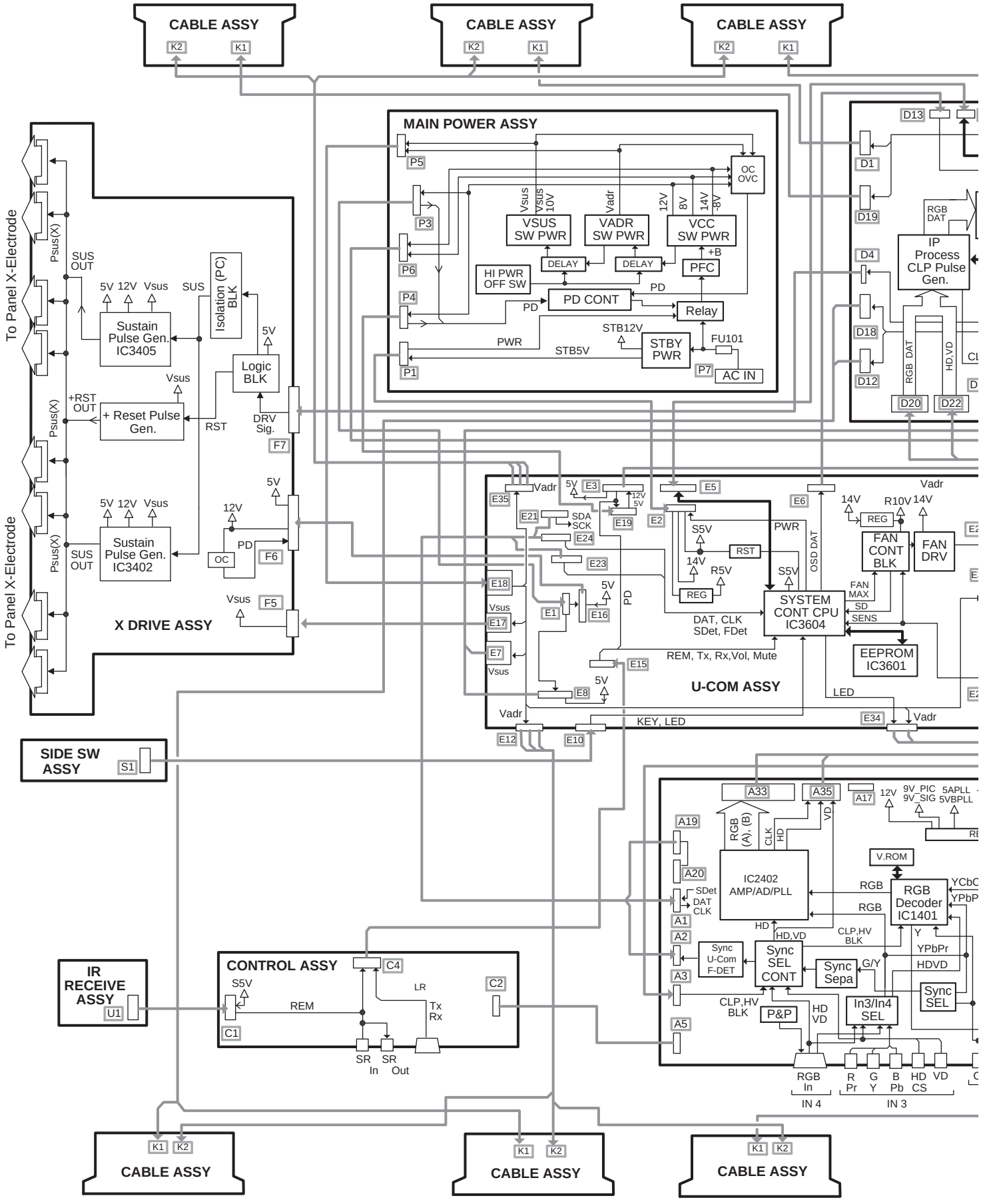
PDP SERVICE ASSY (AWU1032) is composed of the following parts.
Please refer to 2.4 and 2.5 for the illustrations of each part.

Mark	No.	Description	Part No.
2.4 EXTERIOR (2/3)			
	1	Frame Shield H	ANK1609
	2	Frame H	ANG2396
	3	Frame V	ANG2344
	4	Frame Shield V	ANK1610
	5	Corner Holder	ANG2347
	21	Screw	AMZ30P080FCU
	22	Screw	AMZ30P060FMC
	26	FPC Cushion	AEB1341
	37	Spacer	AEC1847
	38	Screw	AMZ30P100FZK
NSP	39	Drive Voltage Label	ARW1097
2.5 EXTERIOR (3/3)			
NSP	3	Frame Assy	ANA1646
NSP	19	Tube Cover	AMR3036
NSP	20	Push Rivet	AEC1748
	23	Locking Spacer	AEC1794
	24	Screw Grommet	AEC1857
NSP	28	Circuit Board Spacer	AEC1744
	30	Locking Spacer	AEC1796
	31	Plastic Rivet	AMR1066
NSP	33	PCB Spacer	AEC1446
	38	Circuit Board Spacer	AEC1795
NSP	42	Plasma Panel Assy	AAV1236

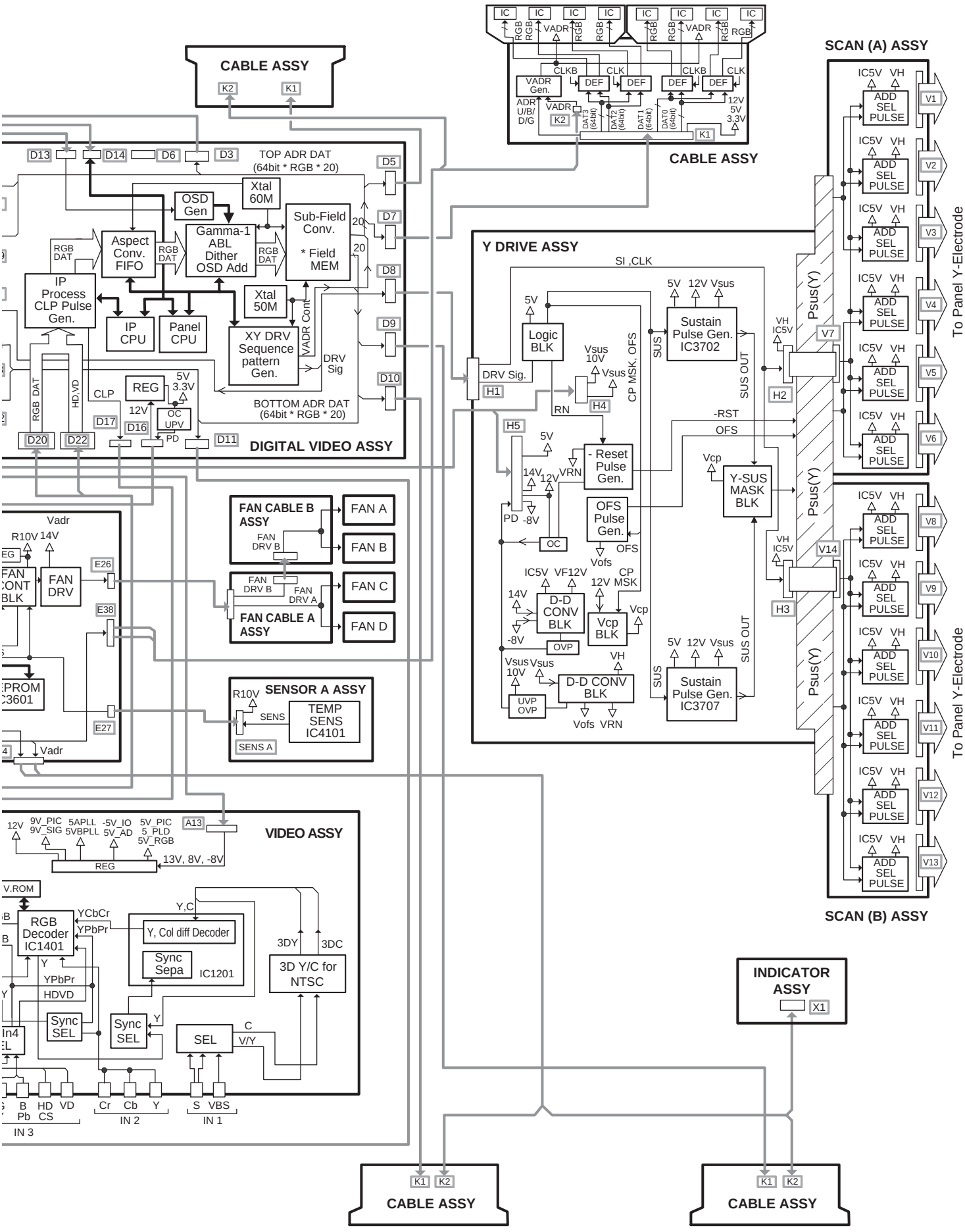
Mark	No.	Description	Part No.
OTHERS			
		Wire Saddle	AEC1797
		Flat Clamp	AEC1858
		Cable Clip	AEC1859
NSP		FPC (XGA2-Y)	ADY1047
NSP		FPC (XGA2-X)	ADY1053
NSP		Address Module (IC21–IC40)	MC-16340
NSP		Panel Sheet H	AMR3153
NSP		Panel Sheet V	AMR3154
NSP		Dust Guard Spacer	AMR3224
PACKING			
		Button Bolt	ABA1259
		Corner Pad	AHA2203
		Corner Carton	AHA2204
		Upper Carton	AHD2970
		Under Carton	AHD2971
		Packing Sheet	AHG1291
		Holder Plate	AHK1008
		Washer	WB80FZB

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

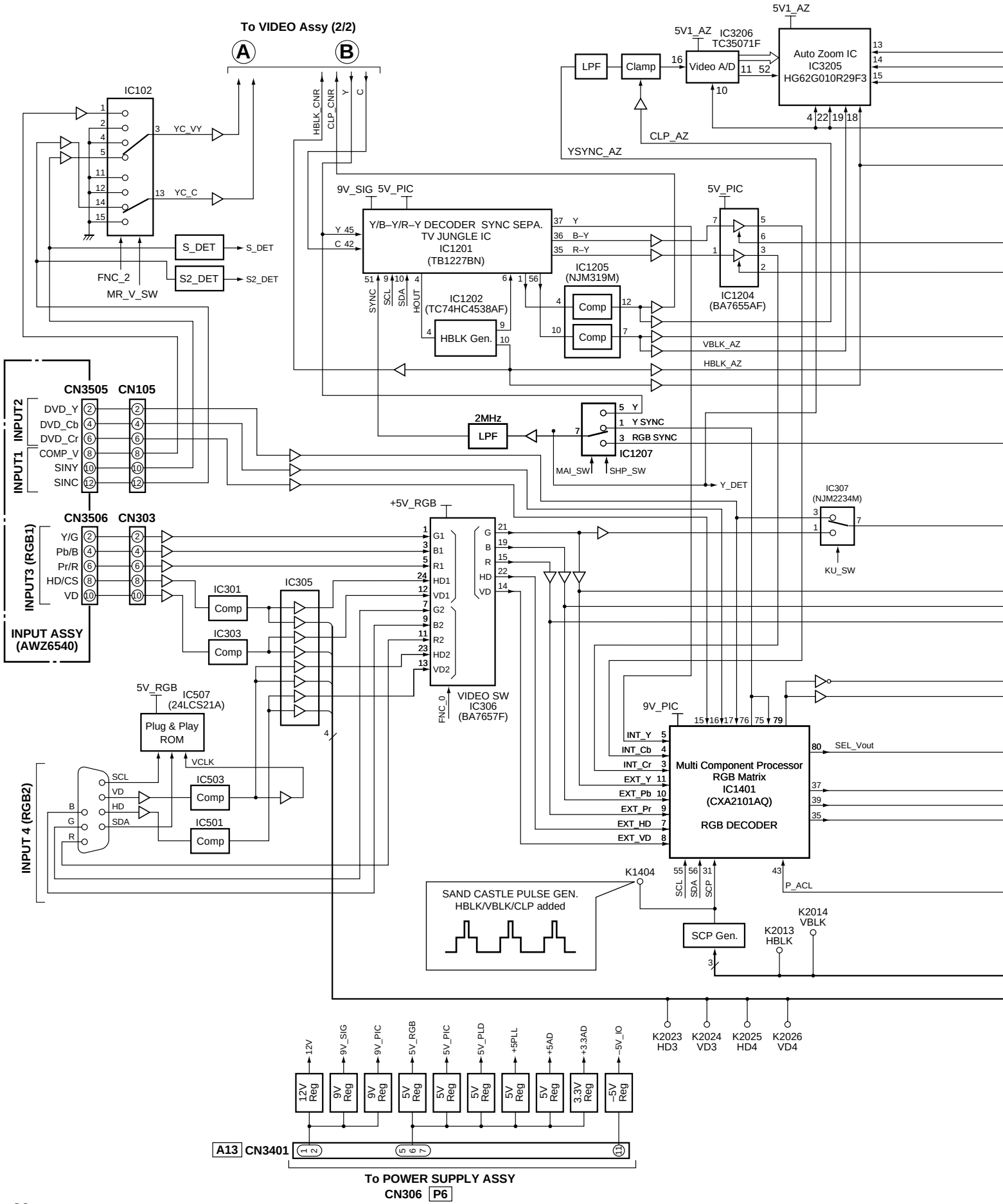
3.1 OVERALL BLOCK DIAGRAM



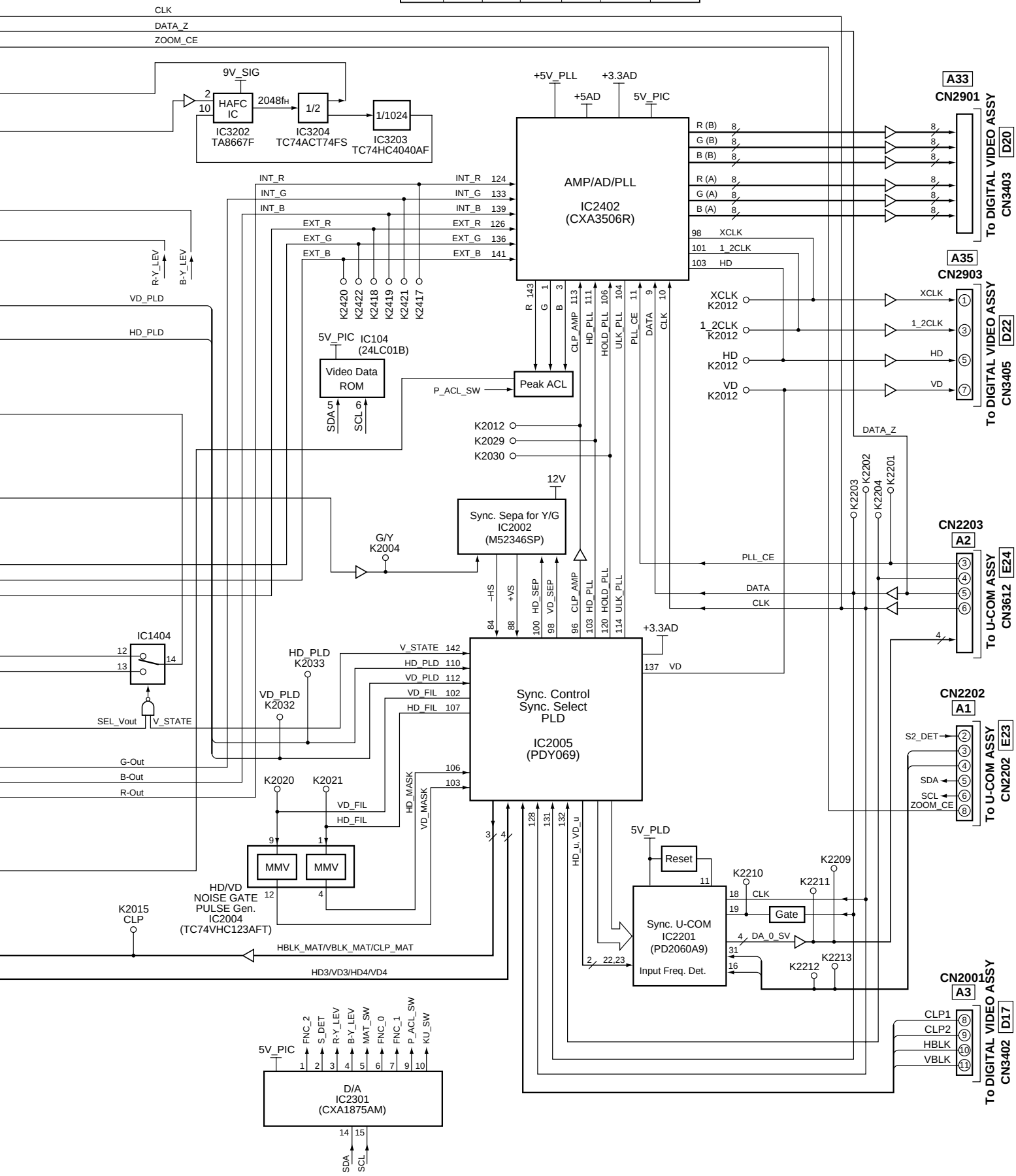
Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "PCB PARTS LIST".



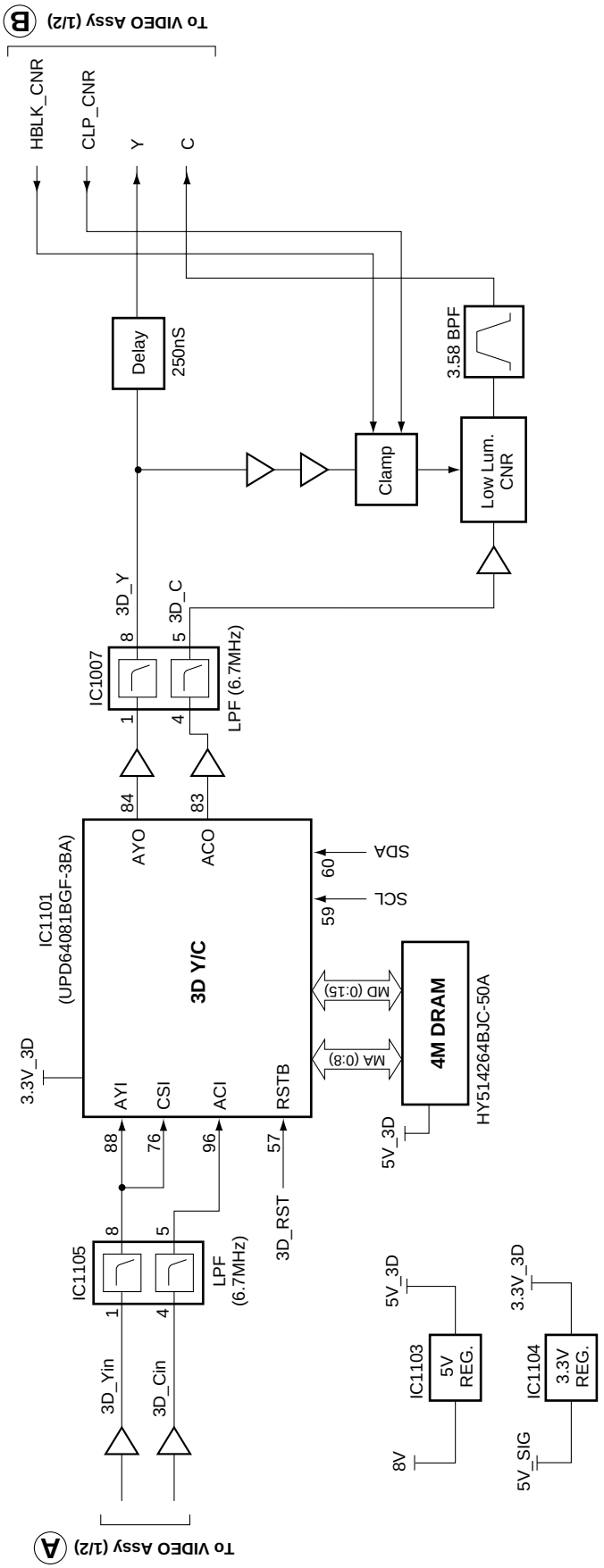
3.2 VIDEO ASSY SECTION (1/2)



IN	Screen	K2904 (VD)	K2903 (HD)	K2901 (CLK)	AD OUT	IP Process
NTSC	4:3	60	15.734k	40.28M	Single (A)	IP
PC XGA (60)	ORG	60	48.36k	32.50M	Dual (A/B)	Through



3.3 VIDEO ASSY SECTION (2/2)



Waveforms of VIDEO ASSY

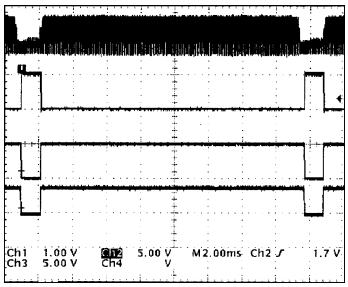
Synchronous Signal Processing Block
(When INPUT1 NTSC RAMP signal is input)

CH1: VIDEO input
V : 1V/div H : 2msec/div

CH2: K2032 (VD_PLD), IC2005 Pin 112
V : 5V/div H : 2msec/div

CH3: K2018 (VD_u), IC2005 Pin 34
V : 5V/div H : 2msec/div

CH4: K2031 (VD_DSEL), IC2005 Pin 137
V : 3.3V/div H : 2msec/div



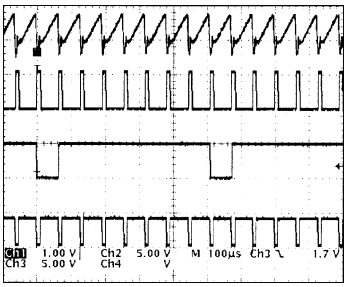
Synchronous Signal Processing Block
(When INPUT1 NTSC RAMP signal is input)

CH1: VIDEO input
V : 1V/div H : 100msec/div

CH2: K2033 (HD_PLD), IC2005 Pin 110
V : 5V/div H : 100msec/div

CH3: K2019 (HD_u), IC2005 Pin 32
V : 5V/div H : 100msec/div

CH4: K2029 (HD_PLL), IC2005 Pin 118
V : 3.3V/div H : 100msec/div



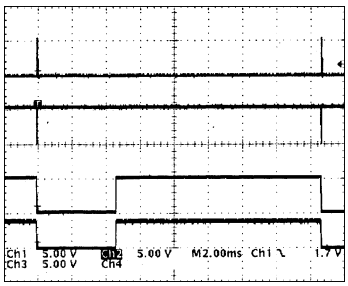
Synchronous Signal Processing Block 2
(INPUT4 PC siganl VESA:
1280x1024@60Hz (SXGA@60Hz)
when there is signal input [separate H, V]

CH1: K2026 (VD_4),
IC2005 Pin71 (VD input)
V: 5V/div H: 2msec/div

CH2: K2020 (VD_FIL), IC2005 Pin 102
V: 5V/div H: 2msec/div

CH3: K2018 (VD_u), IC2005 Pin 34
V : 5V/div H : 2msec/div

CH4: K2031 (VD_DSEL), IC2005 Pin 137
V : 3.3V/div H : 2msec/div

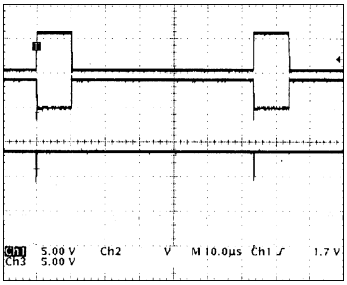


Synchronous Signal Processing Block
(When INPUT1 NTSC RAMP signal is input)

CH1: K2033 (HD_PLD), IC2005 Pin 110
V : 5V/div H : 10msec/div

CH2: K2029 (HD_PLL), IC2005 Pin 118
V : 3.3V/div H : 10msec/div

CH3: K2432 (DIVOUT), IC2402 Pin 103
V : 5V/div H : 10msec/div



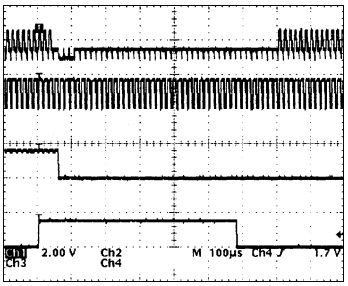
Synchronous Signal Processing Block 2
(INPUT4 PC siganl VESA:
1280x1024@60Hz (SXGA@60Hz)
when there is signal input [separate H, V]

CH1: K2004
(SYNC_SEP: input Green signal),
IC2002 Pin4
V : 2V/div H : 100msec/div

CH2: K2029 (HD_PLL), IC2005 Pin 118
V : 3.3V/div H : 100msec/div

CH3: K2031 (VD_DSEL), IC2005 Pin 137
V : 3.3V/div H : 100msec/div

CH4: K2030 (HOLD_PLL), IC2005 Pin 120
V : 3.3V/div H : 100msec/div



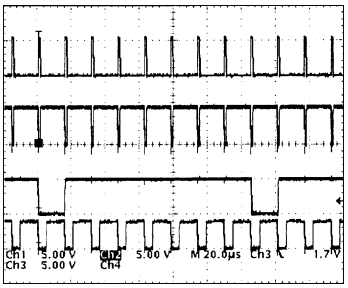
Synchronous Signal Processing Block 2
(INPUT4 PC siganl VESA:
1280x1024@60Hz (SXGA@60Hz)
when there is signal input [separate H, V]

CH1: K2025 (HD_4),
IC2005 Pin69 (HD input)
V : 5V/div H : 20msec/div

CH2: K2021 (HD_FIL), IC2005 Pin 107
V : 5V/div H : 20msec/div

CH3: K2019 (HD_u), IC2005 Pin 32
V : 5V/div H : 20msec/div

CH4: K2029 (HD_PLL), IC2005 Pin 118
V : 3.3V/div H : 20msec/div

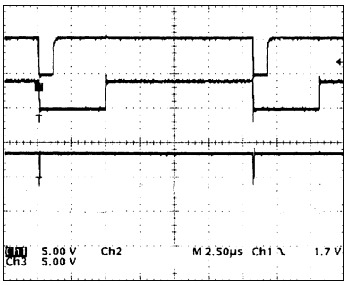


Synchronous Signal Processing Block 2
(INPUT4 PC siganl VESA:
1280x1024@60Hz (SXGA@60Hz)
when there is signal input [separate H, V]

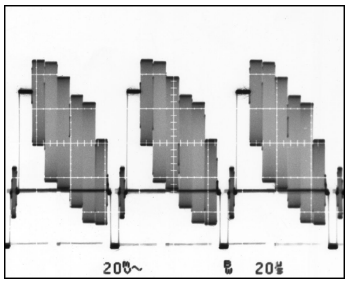
CH1: K2021 (HD_FIL), IC2005 Pin 107
V : 5V/div H : 2.5msec/div

CH2: K2029 (HD_PLL), IC2005 Pin 118
V : 3.3V/div H : 2.5msec/div

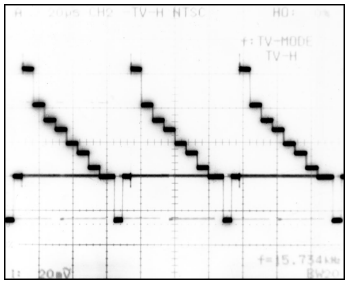
CH3: K2432 (DIVOUT), IC2402 Pin 103
V : 5V/div H : 2.5msec/div



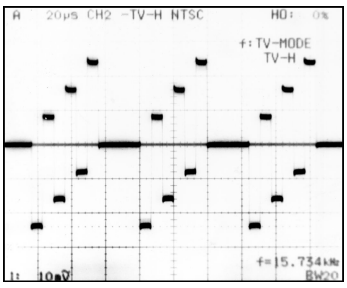
YC_VY
(INPUT1 NTSC Color Bar)
R179
V : 20mV/div H : 20msec/div



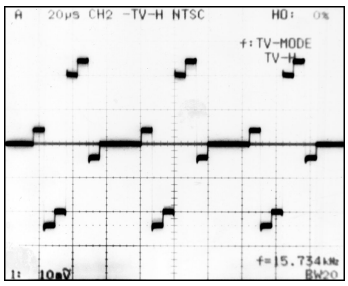
G output
(INPUT3, 4 NTSC Color Bar Y/Cb/Cr)
IC306 (Pin 21)
V : 20mV/div H : 20msec/div



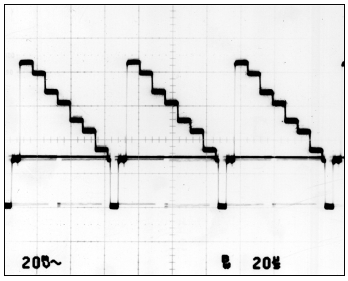
B output
(INPUT3, 4 NTSC Color Bar Y/Cb/Cr)
IC306 (Pin 19)
V : 10mV/div H : 20msec/div



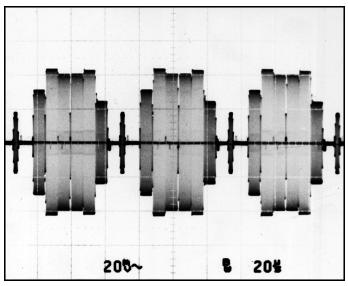
R output
(INPUT3, 4 NTSC Color Bar Y/Cb/Cr)
IC306 (Pin 15)
V : 10mV/div H : 20msec/div



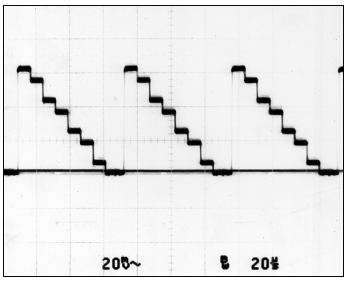
Y input
(INPUT1 NTSC Color Bar)
IC1201 (Pin 45)
V : 20mV/div H : 20msec/div



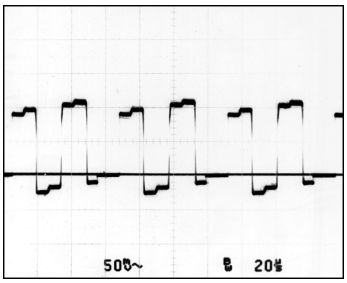
C input
(INPUT1 NTSC Color Bar)
IC1201 (Pin 42)
V : 20mV/div H : 20msec/div



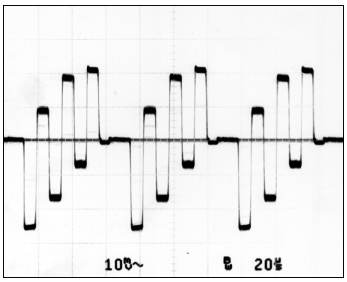
INT_Y input
(INPUT1 NTSC Color Bar)
IC1401 (Pin 5)
V : 20mV/div H : 20msec/div



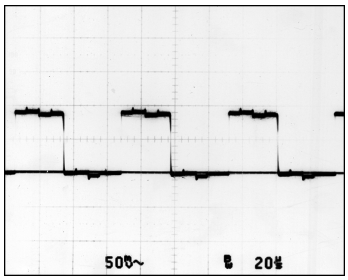
R output
(INPUT1 NTSC Color Bar)
IC1401 (Pin 35)
V : 50mV/div H : 20msec/div



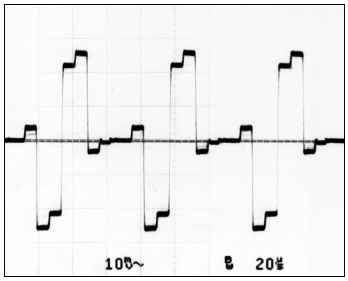
INT_Cb input
(INPUT1 NTSC Color Bar)
IC1401 (Pin 4)
V : 10mV/div H : 20msec/div



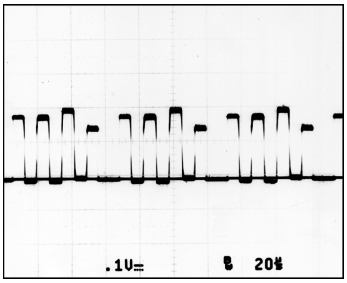
G output
(INPUT1 NTSC Color Bar)
IC1401 (Pin 37)
V : 50mV/div H : 20msec/div



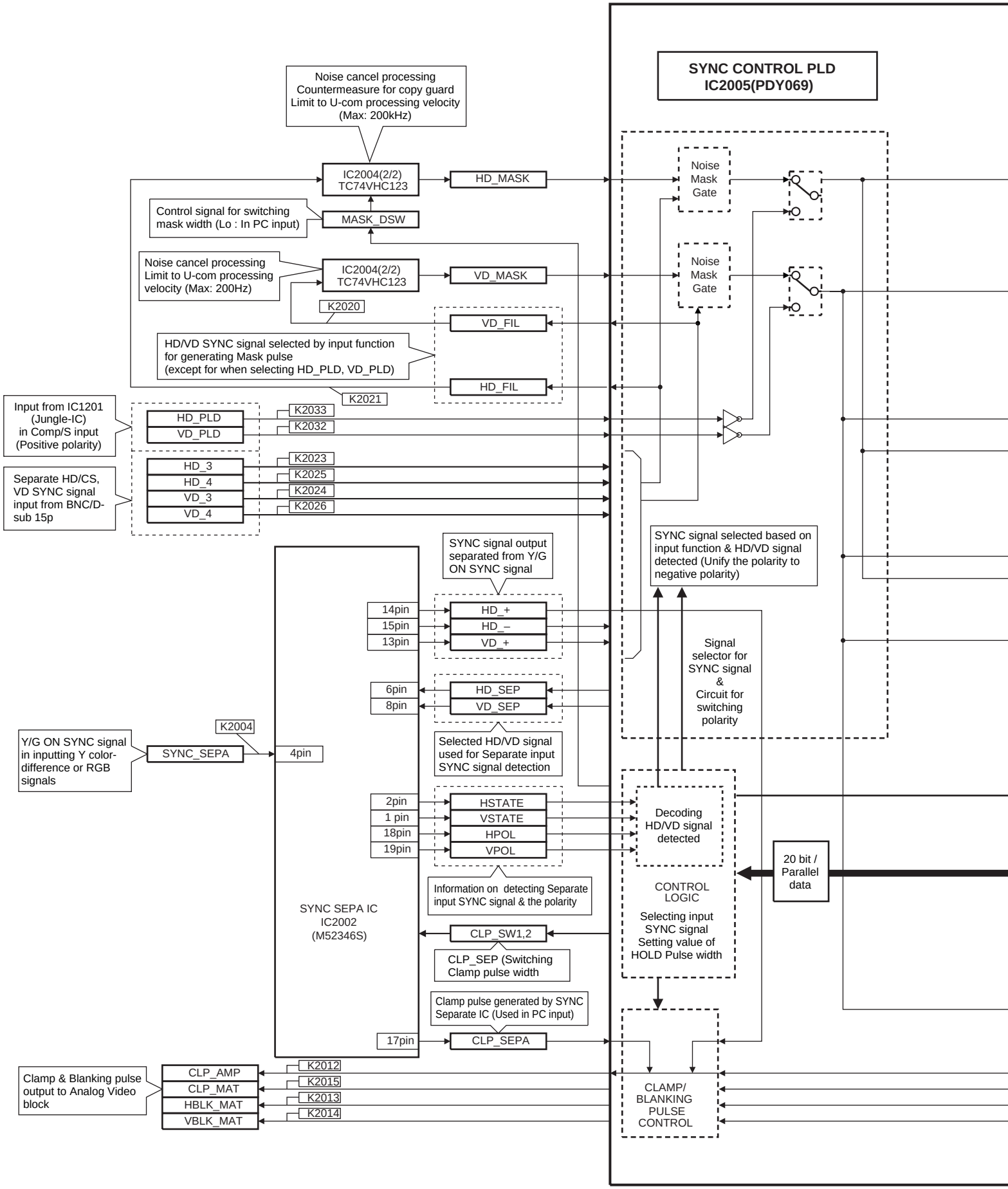
INT_Cr input
(INPUT1 NTSC Color Bar)
IC1401 (Pin 3)
V : 10mV/div H : 20msec/div

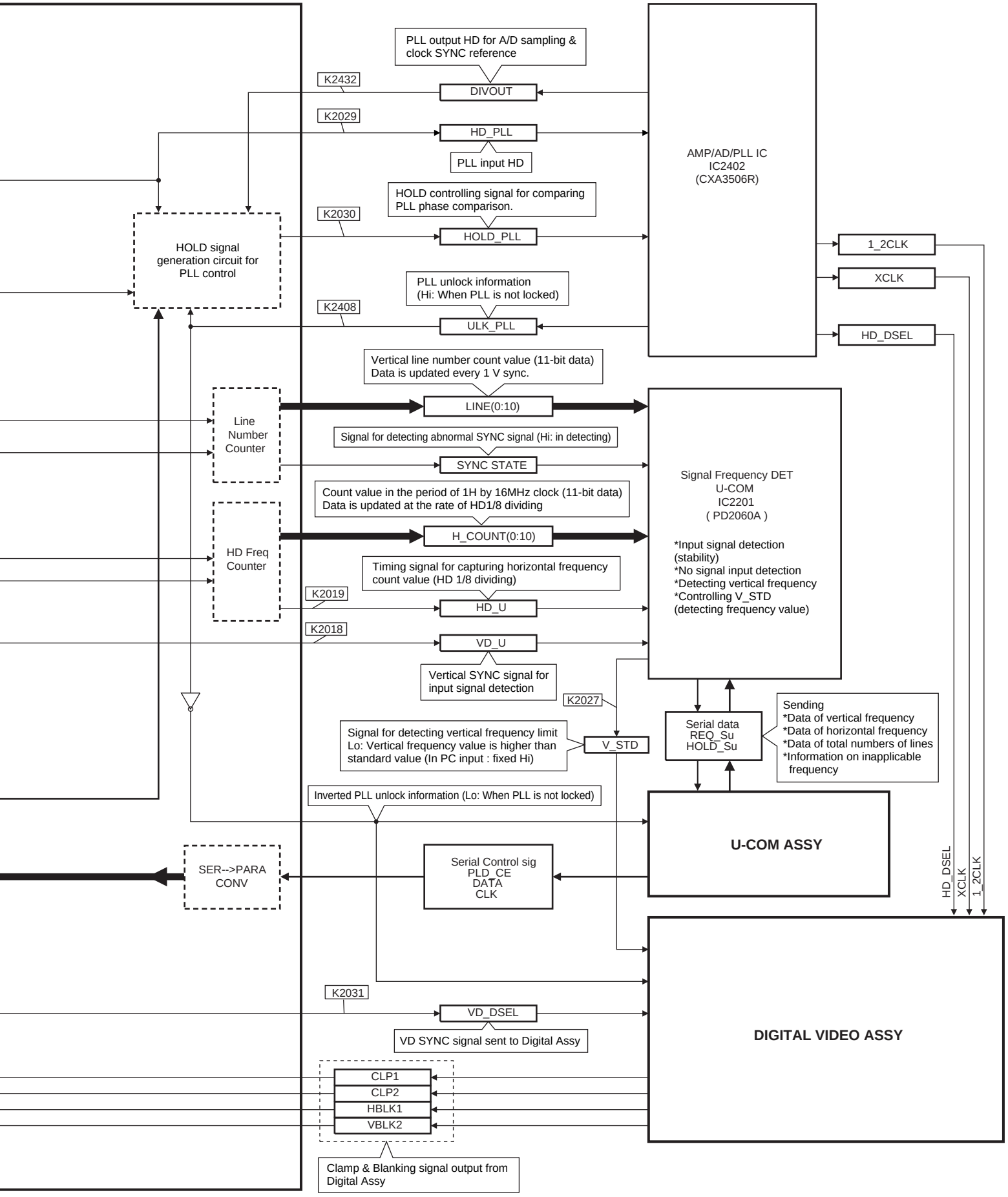


B output
(INPUT1 NTSC Color Bar)
IC1401 (Pin 39)
V : 50mV/div H : 20msec/div

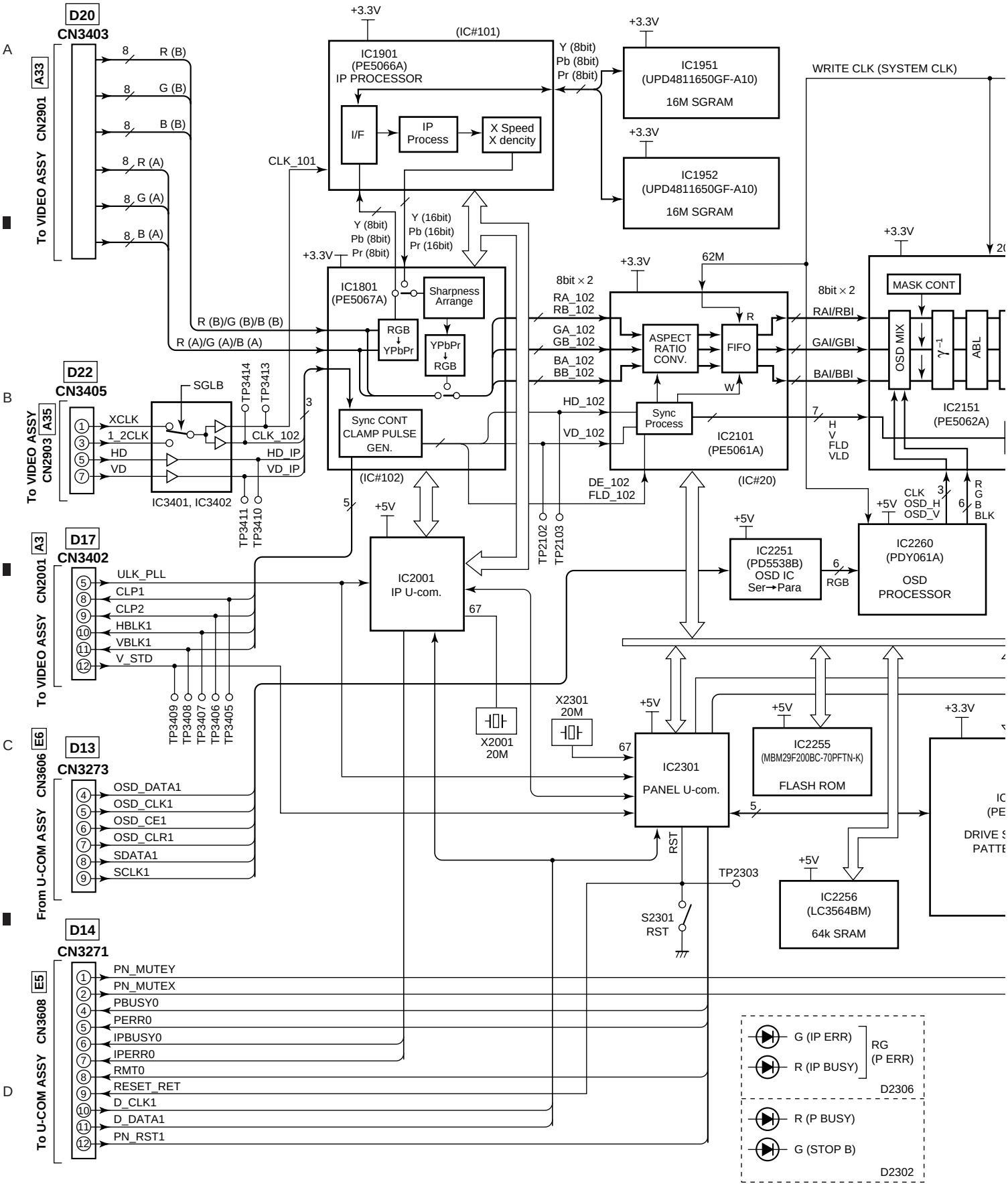


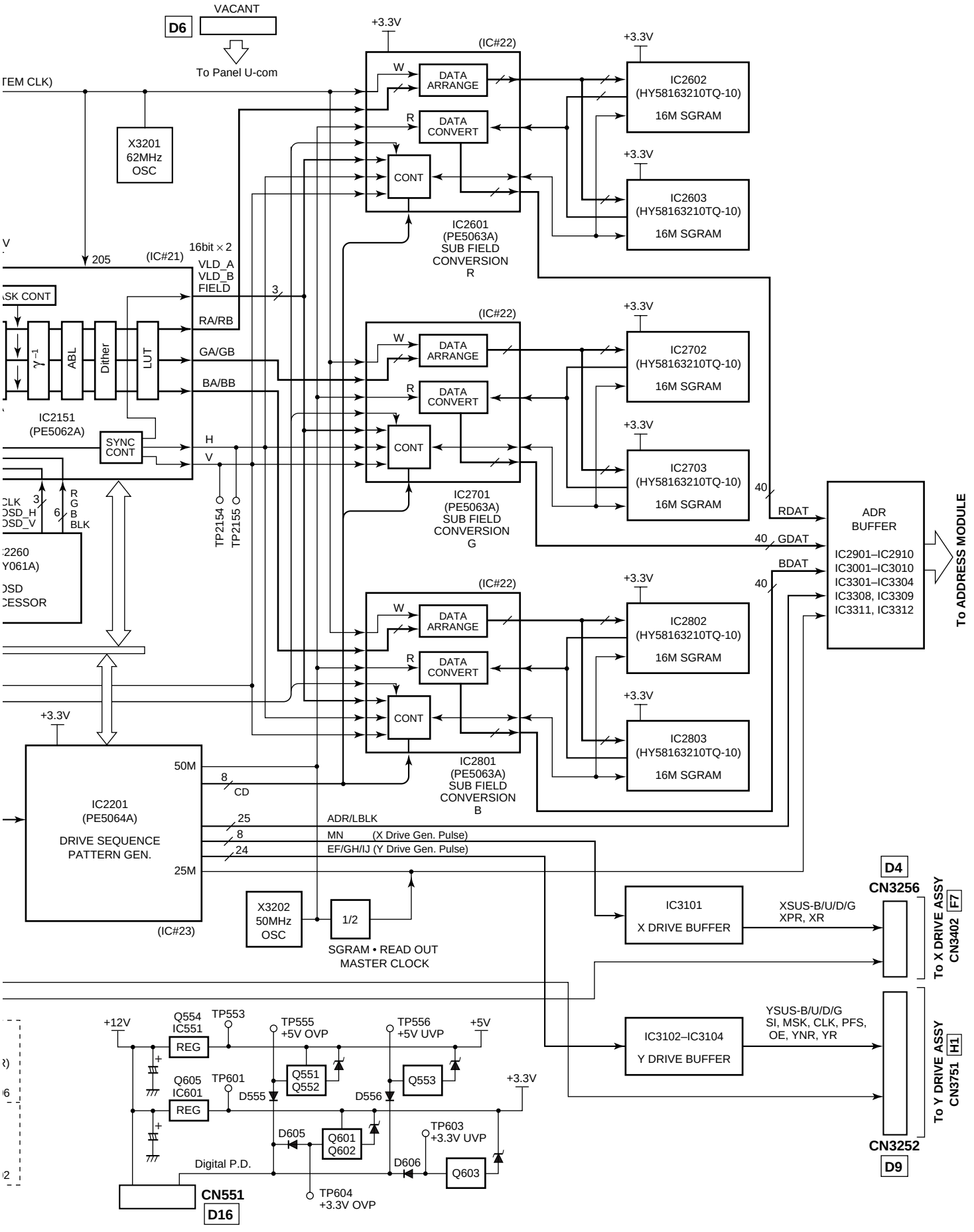
3.4 SYNC SIGNAL PROCESSING BLOCK




PLL output HD for A/D sampling & clock SYNC reference
K2432
DIVOUT
K2029
HD_PLL
PLL input HD
AMP/AD/PLL IC
IC2402
(CXA3506R)
HOLD controlling signal for comparing PLL phase comparison.
K2030
HOLD_PLL
HOLD signal generation circuit for PLL control
1_2CLK
XCLK
HD_DSEL
PLL unlock information (Hi: When PLL is not locked)
K2408
ULK_PLL
Vertical line number count value (11-bit data) Data is updated every 1 V sync.
LINE(0:10)
Line Number Counter
Signal for detecting abnormal SYNC signal (Hi: in detecting)
SYNC STATE
Signal Frequency DET
U-COM
IC2201
(PD2060A)
*Input signal detection (stability)
*No signal input detection
*Detecting vertical frequency
*Controlling V_STD
(detecting frequency value)
Count value in the period of 1H by 16MHz clock (11-bit data) Data is updated at the rate of HD1/8 dividing
H_COUNT(0:10)
HD Freq Counter
Timing signal for capturing horizontal frequency count value (HD 1/8 dividing)
K2019
HD_U
K2018
VD_U
Vertical SYNC signal for input signal detection
K2027
V_STD
Signal for detecting vertical frequency limit Lo: Vertical frequency value is higher than standard value (In PC input : fixed Hi)
Serial data
REQ_Su
HOLD_Su
Sending
*Data of vertical frequency
*Data of horizontal frequency
*Data of total numbers of lines
*Information on inapplicable frequency
Inverted PLL unlock information (Lo: When PLL is not locked)
U-COM ASSY
SER-->PARA CONV
Serial Control sig
PLD_CE
DATA
CLK
HD_DSEL
XCLK
1_2CLK
K2031
VD_DSEL
VD SYNC signal sent to Digital Assy
DIGITAL VIDEO ASSY
CLP1
CLP2
HBLK1
VBLK2
Clamp & Blanking signal output from Digital Assy

3.5 DIGITAL VIDEO ASSY SECTION




D6
VACANT
To Panel U-com
+3.3V
(IC#22)
W
DATA ARRANGE
R
DATA CONVERT
CONT
IC2602 (HY58163210TQ-10) 16M SGRAM
IC2603 (HY58163210TQ-10) 16M SGRAM
IC2601 (PE5063A) SUB FIELD CONVERSION R
X3201 62MHz OSC
205
(IC#21)
16bit × 2
VLD_A
VLD_B
FIELD
RA/RB
GA/GB
BA/BB
γ⁻¹
ABL
Dither
LUT
IC2151 (PE5062A)
SYNC CONT
H
V
IC2702 (HY58163210TQ-10) 16M SGRAM
IC2703 (HY58163210TQ-10) 16M SGRAM
IC2701 (PE5063A) SUB FIELD CONVERSION G
TP2154
TP2155
RDAT
GDAT
BDAT
40
ADR BUFFER
IC2901–IC2910
IC3001–IC3010
IC3301–IC3304
IC3308, IC3309
IC3311, IC3312
To ADDRESS MODULE
IC2802 (HY58163210TQ-10) 16M SGRAM
IC2803 (HY58163210TQ-10) 16M SGRAM
IC2801 (PE5063A) SUB FIELD CONVERSION B
IC2201 (PE5064A)
DRIVE SEQUENCE PATTERN GEN.
(IC#23)
50M
25M
CD
ADR/LBLK
MN (X Drive Gen. Pulse)
EF/GH/IJ (Y Drive Gen. Pulse)
X3202 50MHz OSC
1/2
SGRAM • READ OUT MASTER CLOCK
IC3101
X DRIVE BUFFER
XSUS-B/U/D/G
XPR, XR
D4
CN3256
To X DRIVE ASSY CN3402 F7
IC3102–IC3104
Y DRIVE BUFFER
YSUS-B/U/D/G
SI, MSK, CLK, PFS,
OE, YNR, YR
To Y DRIVE ASSY CN3751 H1
CN3252
D9
+12V
Q554
IC551
REG
TP553
TP555
+5V OVP
TP556
+5V UVP
+5V
Q551
Q552
Q553
Q605
IC601
TP601
D555
D556
+3.3V
D605
Q601
Q602
TP603
+3.3V UVP
D606
Q603
Digital P.D.
CN551
D16
TP604
+3.3V OVP

Waveforms of DIGITAL VIDEO ASSY

Blanking waveform for analog use

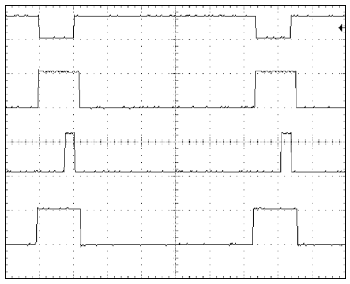
CH1: TP3410 (HDIP)

CH2: TP3405 (CLP1)

CH3: TP3406 (CLP2)

CH4: TP3407 (HBLK1)

V : 5V/div H : 10msec/div



I-P H synchronous waveform

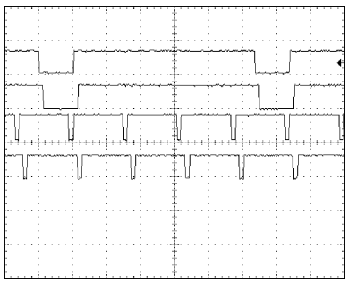
CH1: TP3410 (HD_IP)

CH2: IC1801 Pin 168 (Hi) — IC1901 Pin 57

CH3: IC1901 Pin 55 (Hp) — IC1801 Pin 170

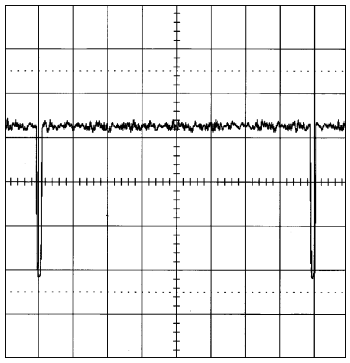
CH4: IC1801 Pin 98 (HD_102)

V : 5V/div H : 10msec/div



H synchronous waveform

TP2155
V : 1V/div H : 2msec/div



I-P V synchronous waveform

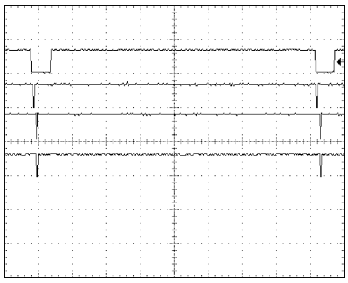
CH1: TP3411 (VD_IP)

CH2: IC1801 Pin 167 (Vi) — IC1901 Pin 58

CH3: IC1901 Pin 56 (Vp) — IC1801 Pin 169

CH4: IC1801 Pin 97 (VD_102)

V : 5V/div H : 2msec/div

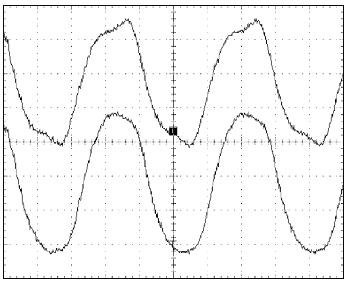


I-P clock waveform

CH1: IC1801 Pin 3 (CLK_102)

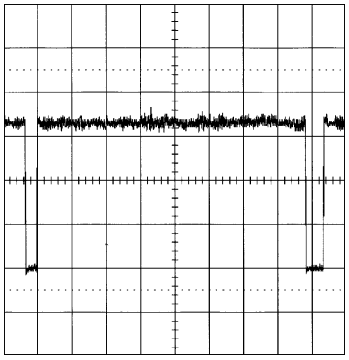
CH2: IC1901 Pin 239 (CLK_101)

V : 1V/div H : 5nsec/div



STOP B waveform

TP2205
V : 1V/div H : 2msec/div



I-P V synchronous waveform (enlarged)

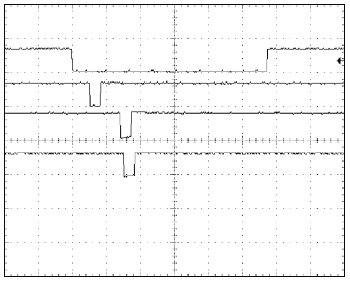
CH1: TP3411 (VD_IP)

CH2: IC1801 Pin 167 (Vi) — IC1901 Pin 58

CH3: IC1901 Pin 56 (Vp) — IC1801 Pin 169

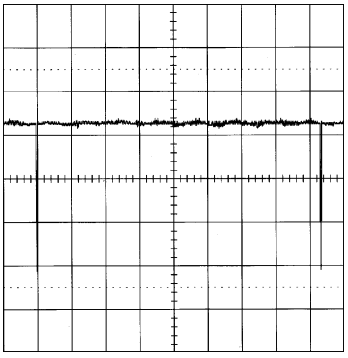
CH4: IC1801 Pin 97 (VD_102)

V : 5V/div H : 200msec/div



V synchronous waveform

TP2154
V : 1V/div H : 2msec/div



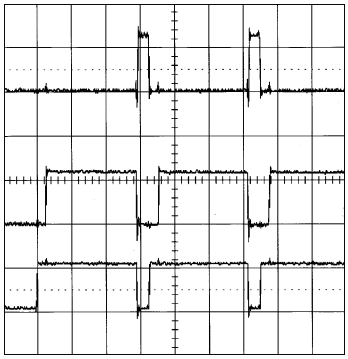
ADR resonant control signal waveform

CH1: IC3303 Pin11 (ADR_U)

CH2: IC3303 Pin12 (ADR_B)

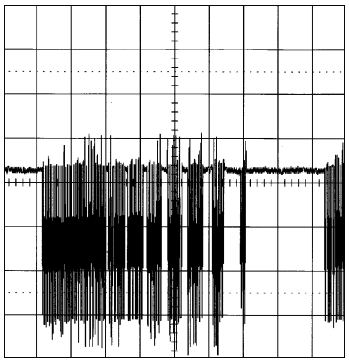
CH3: IC3303 Pin13 (ADR_D)

V : 5V/div H : 1msec/div



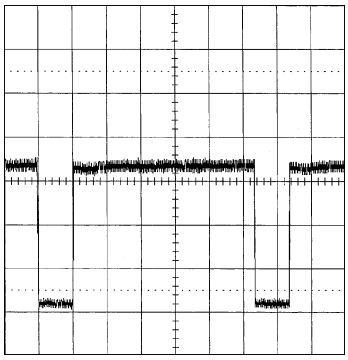
Address resonant output waveform

IC2910 Pin 13
V : 1V/div H : 2msec/div



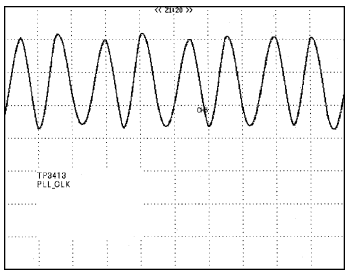
IC1801 HD input waveform

CN3404 Pin 29 (HD_IP), TP3410
V : 1V/div H : 10msec/div



IC1901 clock input waveform

CN3404 Pin 26 (CLK_101), TP3413
V : 1V/div H : 20nsec/div

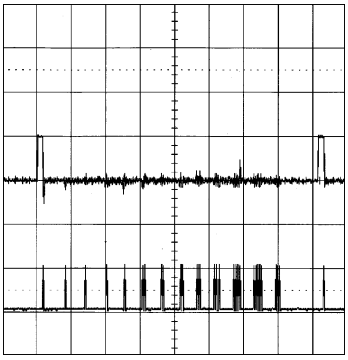


X drive waveform

CH1: IC3101 Pin 12 (XSUS_U)

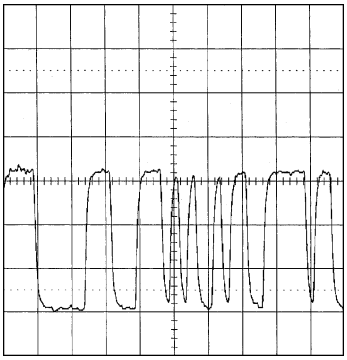
CH2: IC3101 Pin 15 (XPR_U)

V : 0.5V/div H : 2msec/div



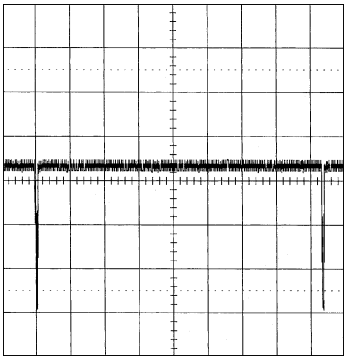
GA input waveform

IC1801 Pin 31 (GA_IP (O))
V : 1V/div H : 0.1msec/div



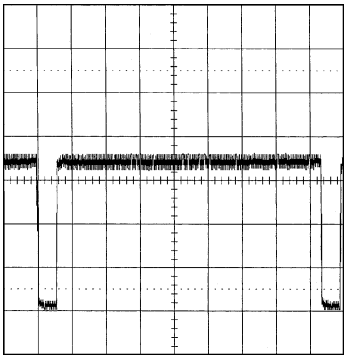
VD input waveform

IC2101 Pin 236 (VD_102), TP2102
V : 1V/div H : 2msec/div



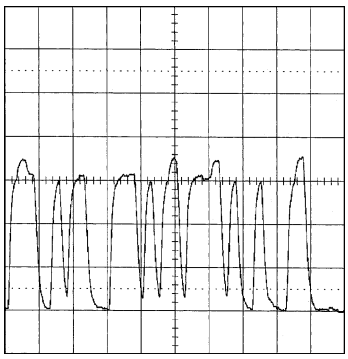
IC1801 VD input waveform

CN3404 Pin 30 (VD_IP), TP3411
V : 1V/div H : 2msec/div



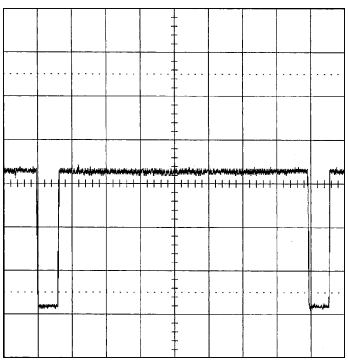
GA output waveform

IC1801 Pin 121 (GA_102 (O))
V : 1V/div H : 0.1msec/div



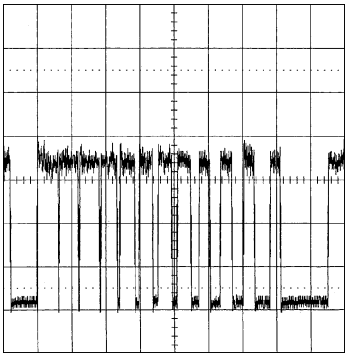
HD input waveform

IC2101 Pin 235 (HD_102), TP2103
V : 1V/div H : 2msec/div



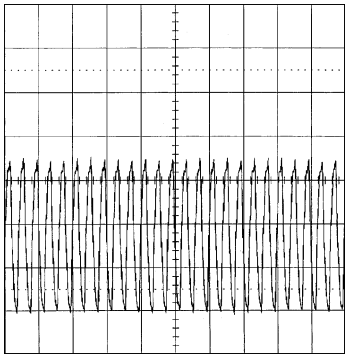
Address control signal

IC3304 Pin 11 (LBLK)
V : 1V/div H : 2msec/div



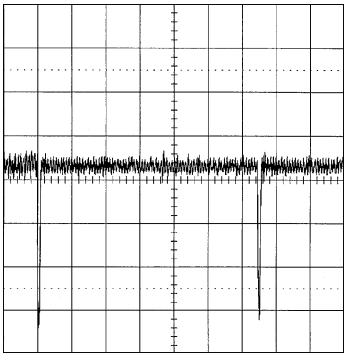
Address control signal

IC3308 Pin 15 (CLKDUI)
V : 1V/div H : 0.1msec/div

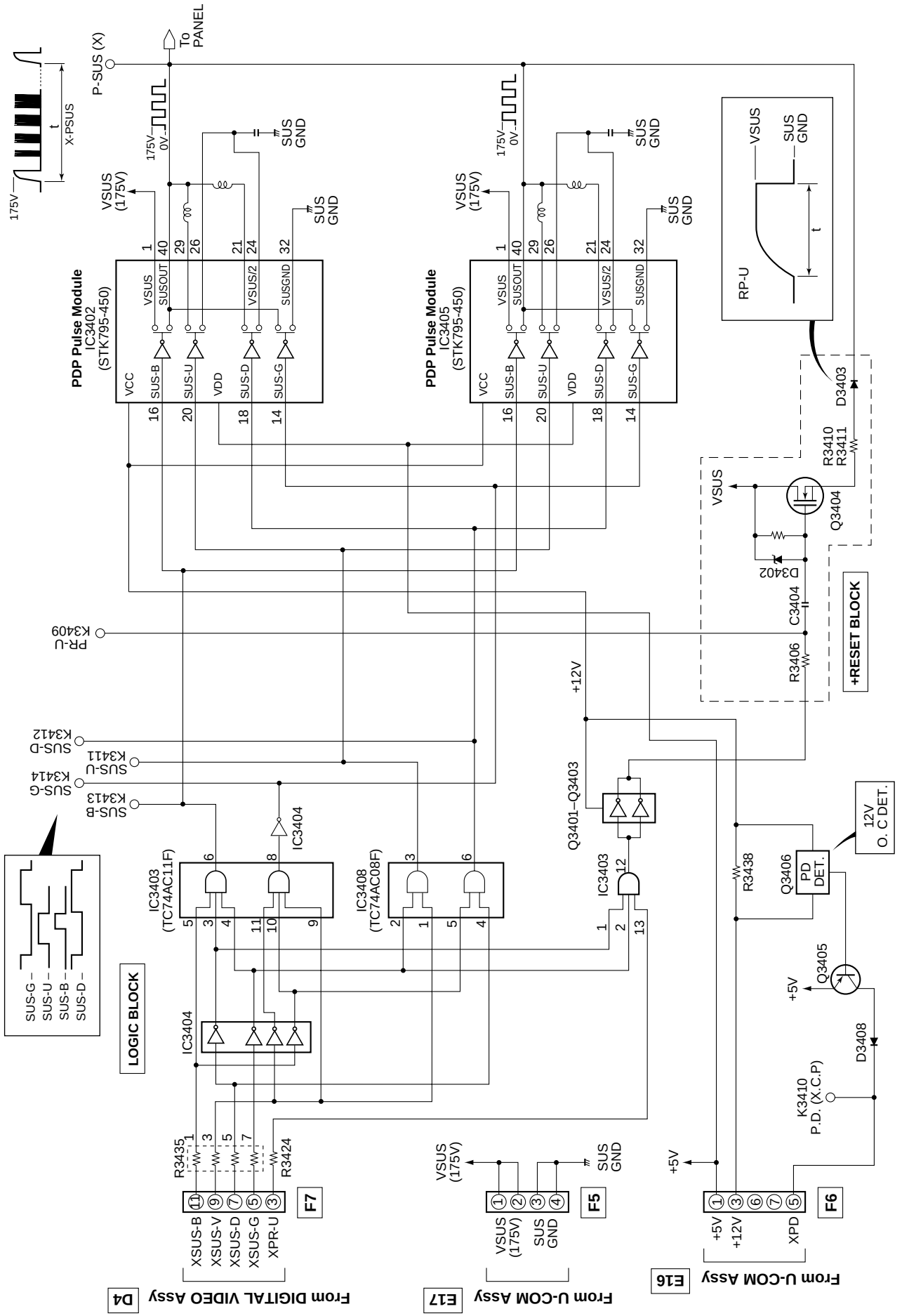


Address control signal

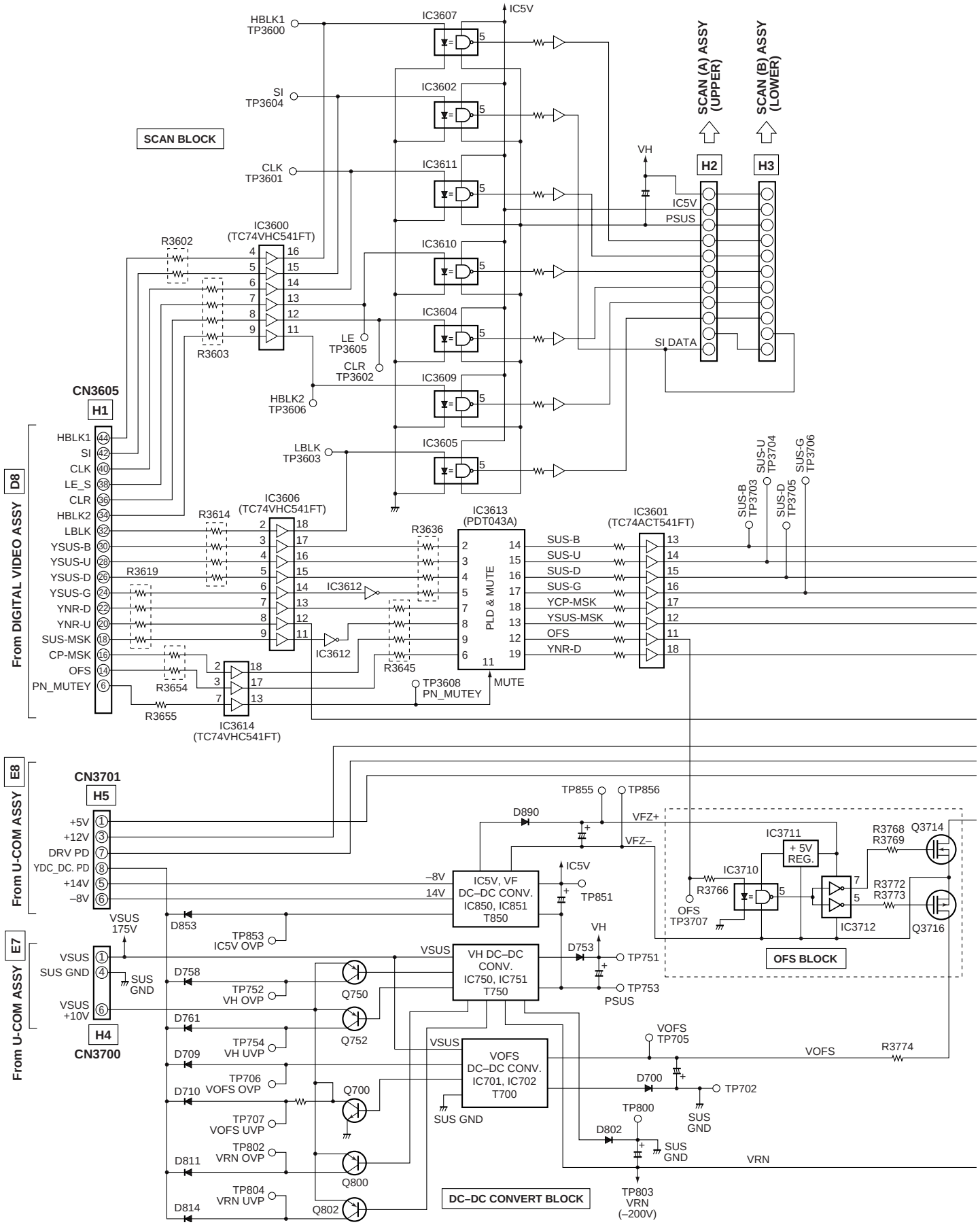
CN3275 Pin 26 (LEDUI)
V : 1V/div H : 0.5msec/div

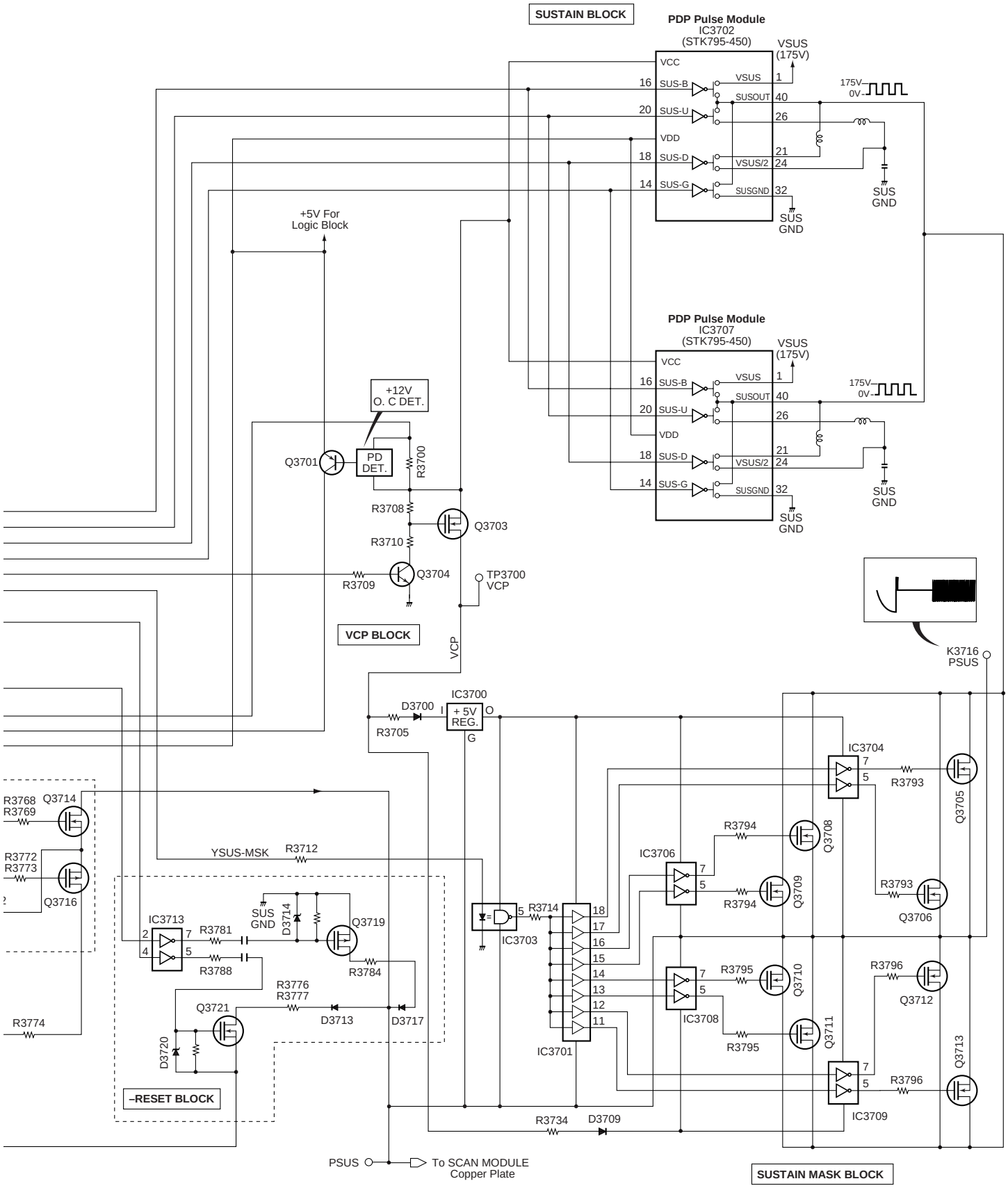


3.6 X DRIVE ASSY SECTION



3.7 Y DRIVE ASSY SECTION

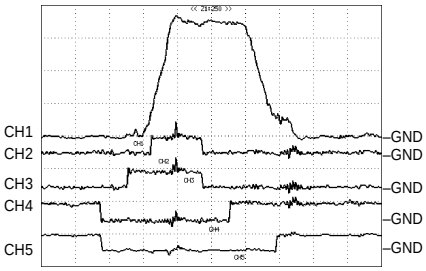



SUSTAIN BLOCK
PDP Pulse Module
IC3702
(STK795-450)
VSUS
(175V)
VCC
SUS-B
SUS-U
VDD
SUS-D
SUS-G
VSUS
SUSOUT
VSUS/2
SUSGND
175V
0V
SUS GND
+5V For
Logic Block
PDP Pulse Module
IC3707
(STK795-450)
+12V
O. C DET.
Q3701
PD
DET.
R3700
R3708
Q3703
R3710
Q3704
R3709
TP3700
VCP
VCP BLOCK
K3716
PSUS
IC3700
D3700
+ 5V
REG.
R3705
R3768
R3769
Q3714
R3772
R3773
Q3716
YSUS-MSK
R3712
IC3713
R3781
R3788
SUS
GND
D3714
Q3719
R3784
R3776
R3777
Q3721
D3713
D3717
D3720
R3774
–RESET BLOCK
IC3703
R3714
IC3701
IC3704
R3793
Q3705
R3794
Q3708
IC3706
Q3709
R3793
Q3706
R3795
Q3710
IC3708
R3795
Q3711
R3796
Q3712
R3796
Q3713
IC3709
R3734
D3709
PSUS
To SCAN MODULE
Copper Plate
SUSTAIN MASK BLOCK

Waveforms of X DRIVE Assy, Y DRIVE Assy and SCAN MODULE

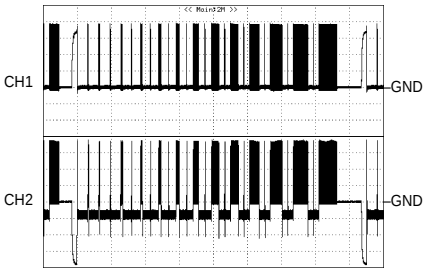
Sustained waveform

CH1: P.SUS TP3716 (P.SUS) – TP3713 (SUS.GND)
V: 50V/div., H: 500nsec/div.
CH2: YSUS-B TP3703 (YSUS-B) – TP3609 (D.GND)
V: 10V/div., H: 500nsec/div.
CH3: YSUS-U TP3704 (YSUS_U) – TP3609 (D.GND)
V: 10V/div., H: 500nsec/div.
CH4: YSUS-D TP3705 (YSUS_D) – TP3609 (D.GND)
V: 10V/div., H: 500nsec/div.
CH5: YSUS-G TP3706 (YSUS-G) – TP3609 (D.GND)
V: 10V/div., H: 500nsec/div.



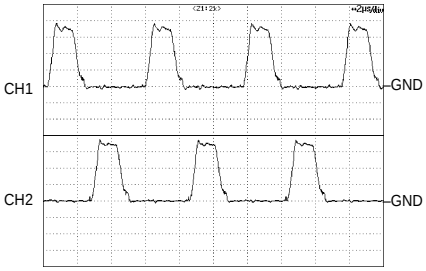
Sustained waveform (1 field)

CH1: X drive waveform
K3402 (P. SUS) – K3404 (SUS. GND)
V: 50V/div., H: 2msec/div.
CH2: Y drive waveform
TP3716 (P. SUS) – TP3713 (SUS. GND)
V: 50V/div., H: 2msec/div.



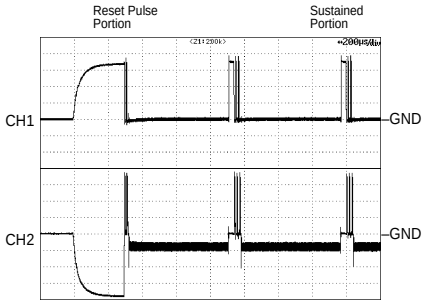
Sustained waveform (1 field; enlarged)

CH1: X drive waveform
K3402 (P. SUS) – K3404 (SUS. GND)
V: 50V/div., H: 2µsec/div.
CH2: Y drive waveform
TP3716 (P. SUS) – TP3713 (SUS. GND)
V: 50V/div., H: 2µsec/div



Sustained waveform (1st sub-field)

CH1: X drive waveform
K3402 (P. SUS) – K3404 (SUS. GND)
V: 50V/div., H: 200µsec/div.
CH2: Y drive waveform
TP3716 (P.SUS) – TP3713 (SUS.GND)
V: 50V/div., H: 200µsec/div.

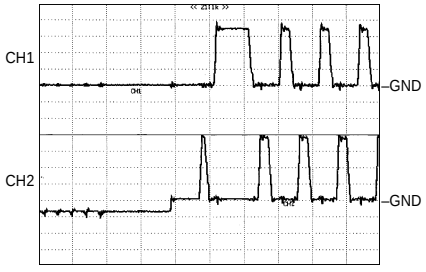


Sustained waveform
(reset pulse portion; enlarged)

CH1: X drive waveform
K3402 (P. SUS) – K3404 (SUS. GND)
V: 50V/div., H: 20µsec/div.
CH2: Y drive waveform
TP3716 (P. SUS) – TP3713 (SUS. GND)
V: 50V/div., H: 20µsec/div.

Sustained waveform
(portion where sustaining was started; enlarged)

CH1: X drive waveform
K3402 (P. SUS) – K3404 (SUS. GND)
V : 50V/div., H : 5µsec/div.
CH2: Y drive waveform
TP3716 (P. SUS) – TP3713 (SUS. GND)
V : 50V/div., H : 5µsec/div.

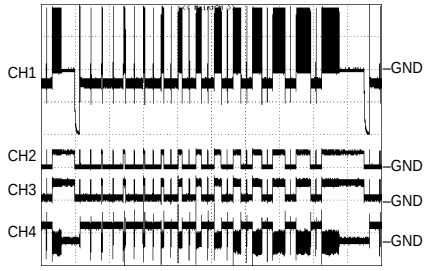


Sustained waveform
(portion where sustaining was ended; enlarged)

CH1: X drive waveform
K3402 (P. SUS) – K3404 (SUS. GND)
V: 50V/div., H: 5µsec/div.
CH2: Y drive waveform
TP3716 (P. SUS) – TP3713 (SUS. GND)
V: 50V/div., H: 5µsec/div.

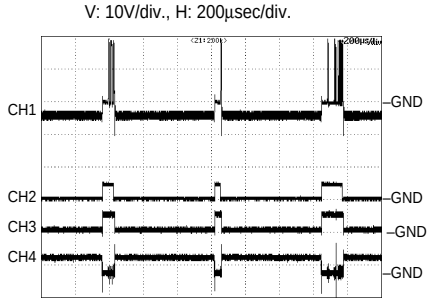
Control waveforms for additional pulses (1 field)

CH1: Y drive waveform
TP3716 (P.SUS) – TP3713 (SUS.GND)
V: 100V/div., H: 2msec/div.
CH2: CP_MSK
IC3601 Pin17 (CP_MSK) – TP3609 (D.GND)
V: 10V/div., H: 2msec/div.
CH3: SUS_MSK
IC3601 Pin12 (YSUS_MSK) – TP3609 (D.GND)
V: 10V/div., H: 2msec/div.
CH4: OFS TP3707 (OFS) – TP3609 (D.GND)
V: 10V/div., H: 2msec/div.



Control waveforms for additional pulses
(1 sub-field; enlarged)

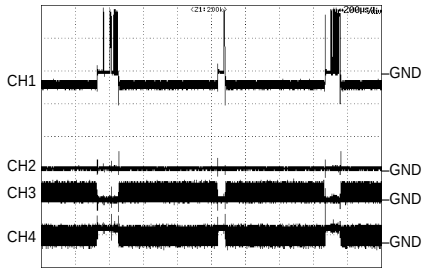
CH1: Y drive waveform
TP3716 (P.SUS) – TP3713 (SUS.GND)
V: 50V/div., H: 200µsec/div.
CH2: CP_MSK
IC3601 Pin17 (CP_MSK) – TP3609 (D.GND)
V: 10V/div., H: 200µsec/div.
CH3: SUS_MSK
IC3601 Pin12 (YSUS_MSK) – TP3609 (D.GND)
V: 10V/div., H: 200µsec/div.
CH4: OFS TP3707 (OFS) – TP3609 (D.GND)
V: 10V/div., H: 200µsec/div.



SCAN IC control waveform (1 sub-field)

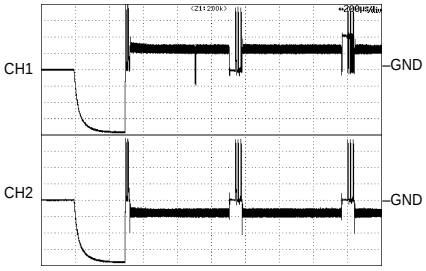
CH1: Y drive waveform
TP3716 (P.SUS) – TP3713 (SUS.GND)
V: 50V/div., H: 200µsec/div.

CH2: SI TP3604 (SI) – TP3609 (D.GND)
CH3: CLK TP3601 (CLK) – TP3609 (D.GND)
CH4: LBLK TP3603 (LBLK) – TP3609 (D.GND)
V: 10V/div., H: 200µsec/div.



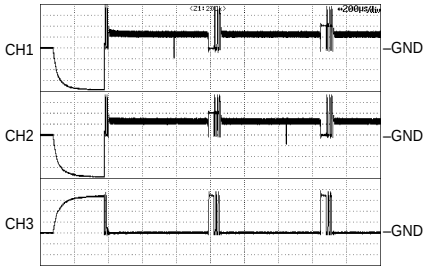
Y-drive sustained waveforms
(for 1 field)

CH1: SCAN output waveform
SCAN IC output – TP3713 (SUS.GND)
V: 50V/div., H: 2msec/div.
CH2: Y drive waveform
TP3716 (P.SUS) – TP3713 (SUS.GND)
V: 50V/div., H: 2msec/div.



Sustained waveforms
(selected pulse portions of waveforms; 1 sub-field)

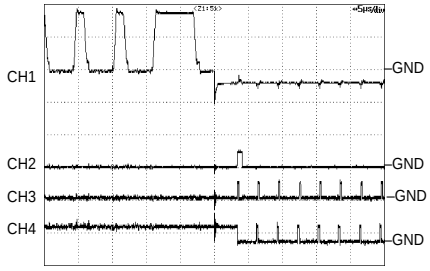
CH1: Y drive waveform
TP3844 – TP3713 (SUS.GND)
CH2: Y drive waveform
TP3837 – TP3713 (SUS.GND)
CH3: X drive waveform
K3402 (P.SUS) – K3404 (SUS.GND)
V: 50V/div., H: 200µsec/div.



SCAN IC control waveforms (enlarged)

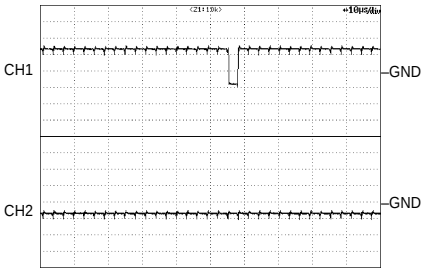
CH1: Y drive waveform
TP3716 (P.SUS) – TP3713 (SUS.GND)
V: 50V/div., H: 5µsec/div.

CH2: SI TP3604 (SI) – TP3609 (D.GND)
CH3: CLK TP3601 (CLK) – TP3609 (D.GND)
CH4: LBLK TP3603 (LBLK) – TP3609 (D.GND)
V: 10V/div., H: 5µsec/div.



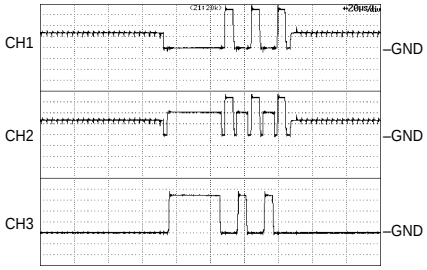
Sustained waveforms
(selected pulse portions of waveforms; enlarged)

CH1: SCAN output waveform
SCAN output – TP3713 (SUS. GND)
V: 50V/div., H: 10µsec/div.
CH2: Y drive waveform
TP3716 (P.SUS) – TP3713 (SUS.GND)
V: 50V/div., H: 10µsec/div.



Sustained waveforms
(selected pulse portions of waveforms; 1 sub-field)
(enlarged)

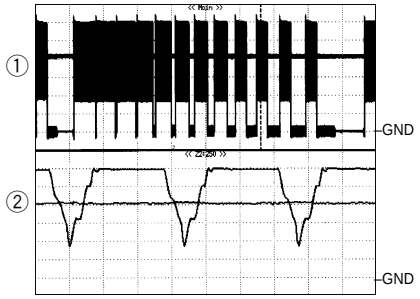
CH1: Y drive waveform
TP3844 – TP3713 (SUS.GND)
CH2: Y drive waveform
TP3837 – TP3713 (SUS.GND)
CH3: X drive waveform
K3402 (P.SUS) – K3404 (SUS.GND)
V: 50V/div., H: 20µsec/div.



Waveforms of CABLE Assy

Address resonant output waveform
(TP 1001) and midpoint voltage (C1001)
(VIDEO input, black display)

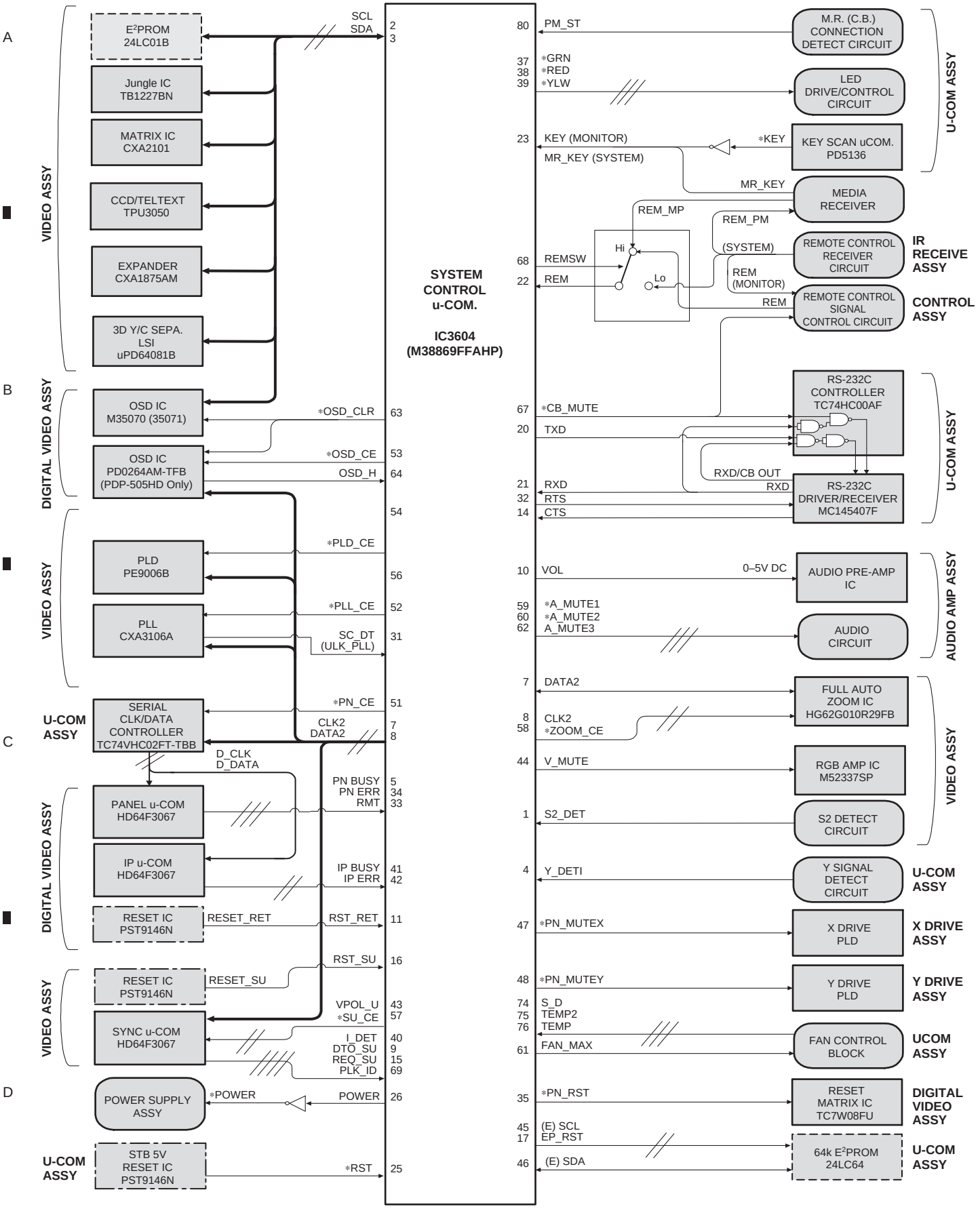
① Field rate V: 2V/div H: 2msec/div
② Resonant pulse rate
V: 2V/div H: 500nsec/div



Address resonant control signal waveform
(VIDEO input, black display; resonant pulse rate)

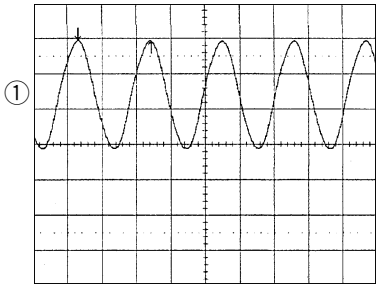
CH1: ADR-U (IC1007 Pin 2) V : 2V/div H : 500nsec/div
CH2: ADR-B (IC1007 Pin 4) V : 2V/div H : 500nsec/div
CH3: ADR-D (IC1010 Pin 1) V : 2V/div H : 500nsec/div
CH4: ADR-G (IC1009 Pin 1) V : 2V/div H : 500nsec/div

3.8 U-COM ASSY SECTION



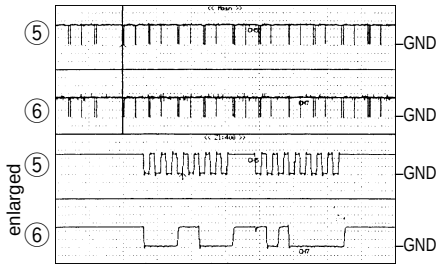
Waveforms of U-COM ASSY

① IC3602-pin4
(Clock input: X3602)
V : 1V/div H : 1msec/div

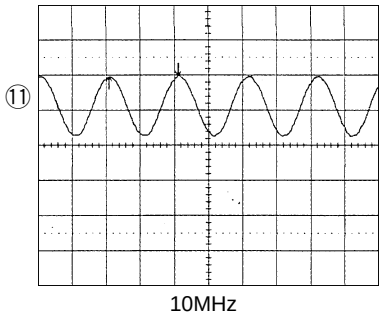


⑤ IC3604-pin7 (CLK2)
V :2V/div H : 50msec/div
IC3604-pin7 (CLK2)(enlarged)
V :2V/div H : 20msec/div

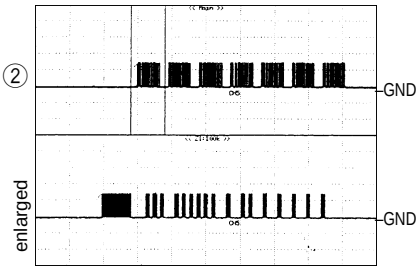
⑥ IC3604-pin8 (DATA2)
V :2V/div H : 50msec/div
IC3604-pin8 (CLK2)(enlarged)
V :2V/div H : 20msec/div



⑪ IC3604-pin28
(Clock input: X3601)
V :2V/div H : 50nsec/div

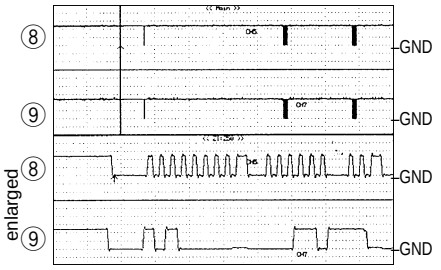


② IC3602-pin19
(Key code output)
V :2V/div H : 100msec/div
IC3602-pin19 (enlarged)
(Key code output)
V :2V/div H : 10msec/div



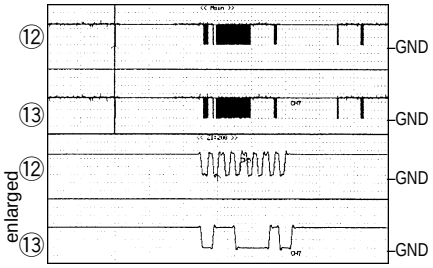
⑧ IC3604-pin45 ((E)SCL)
V :2V/div H : 200msec/div
IC3604-pin45 ((E)SCL)(enlarged)
V :2V/div H : 50msec/div

⑨ IC3604-pin46 ((E)SDA)
V :2V/div H : 200msec/div
IC3604-pin46 ((E)SDA)(enlarged)
V :2V/div H : 50msec/div



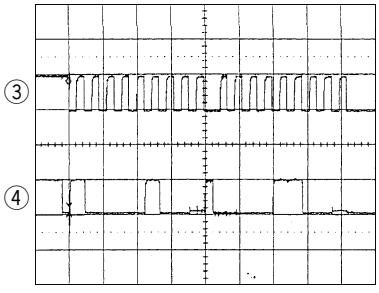
⑬ IC3612-pin10 (D_CLK)
V :2V/div H : 100msec/div
IC3612-pin10 (D_CLK)(enlarged)
V :2V/div H : 20msec/div

⑬ IC3612-pin13 (D_DATA)
V :2V/div H : 100msec/div
IC3612-pin13 (D_DATA)(enlarged)
V :2V/div H : 20msec/div

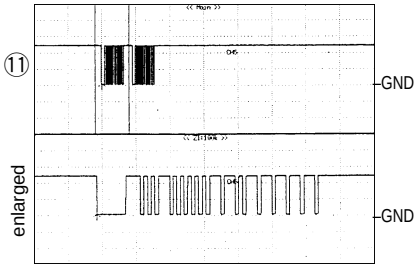


③ IC3604-pin2 (SCL)
V :5V/div H : 50msec/div

④ IC3604-pin3 (SDA)
V :5V/div H : 50msec/div



⑩ IC3604-pin23 (KEY)
V :2V/div H : 100msec/div
IC3604-pin23 (KEY)(enlarged)
V :2V/div H : 10msec/div

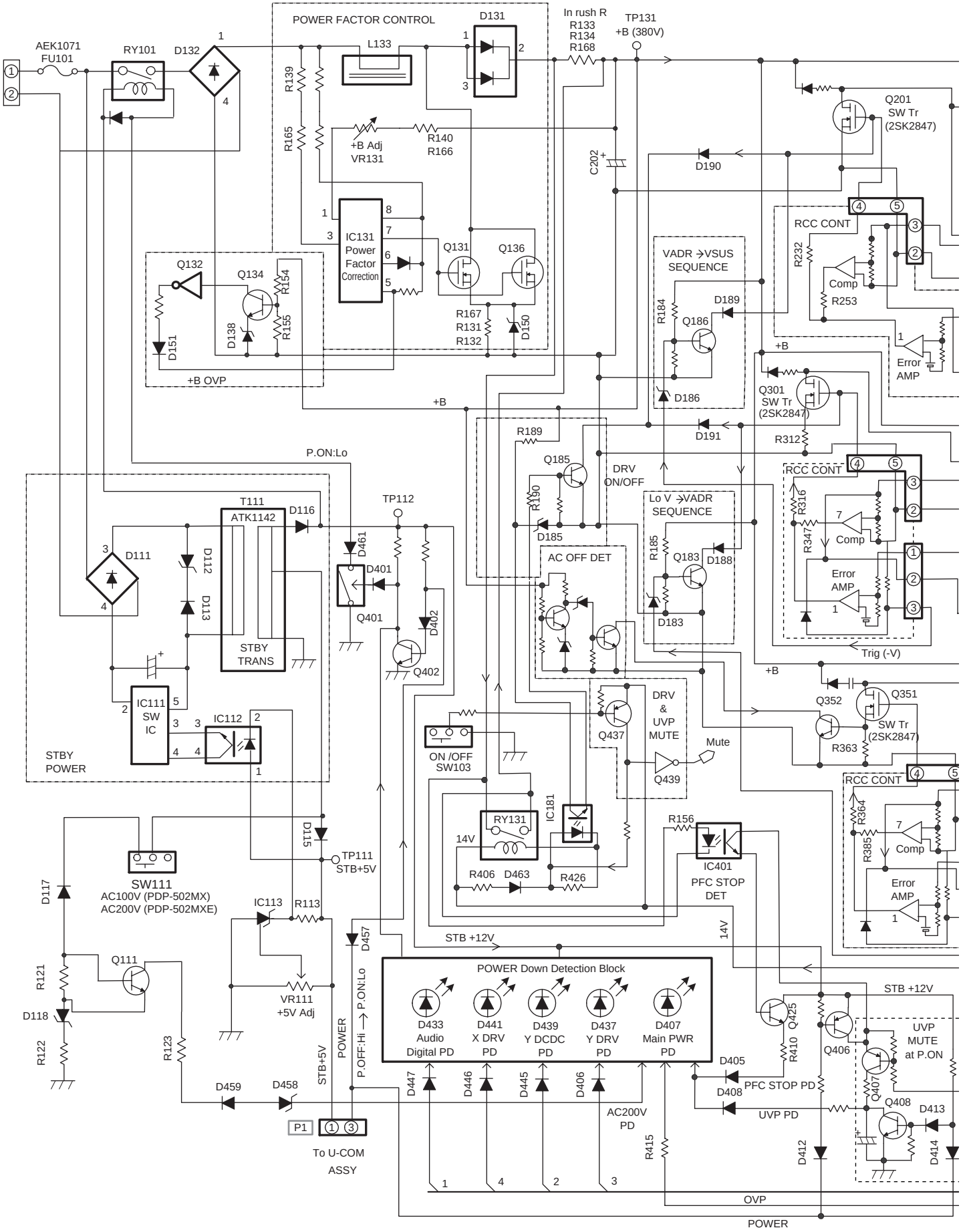


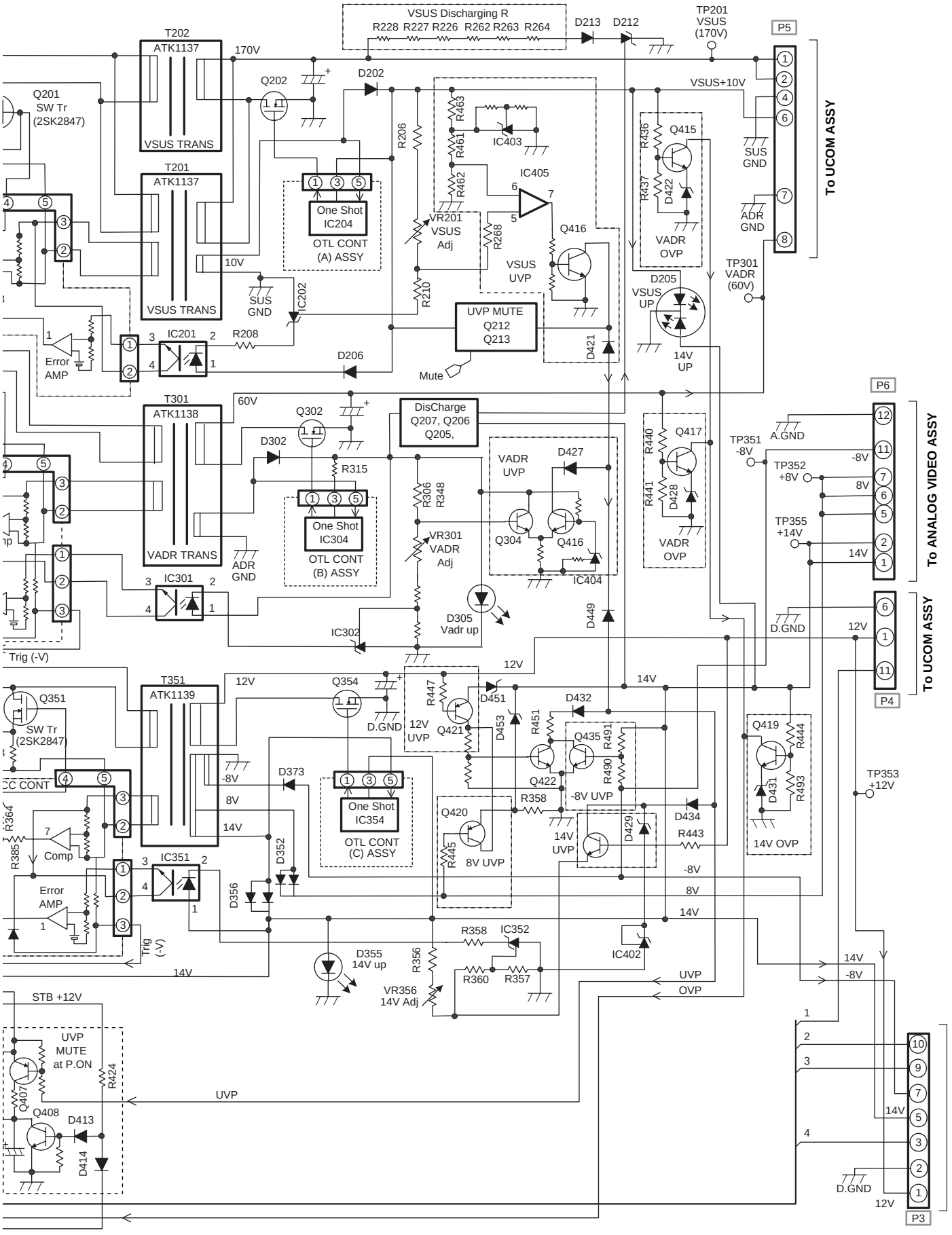
● Pin Function

Pin No.	Name	Function	Operation of Terminals (during power on)	I/O	PDP-502MX	PDP-502MXE	PDP-505HD
1	S2_DET	S2 Signal detection	0–1.3V: Normal, 1.4–2.4V: Letter Box, 2.5–5V: Squeeze	I	○	—	○
	OPTION	Option Video Box detection	High: non existence, Low: existence of Video Box	I	—	○	—
2	SCL	I^2C-BUS Clock	0–5V clock signal: always communicating when power on	O	○	○	○
3	SDA	I^2C-BUS Data	0–5V clock signal: always communicating when power on	I/O	○	○	○
4	V_DETI	Result of Y signal detection	High: Y Signal detected, Low: Y Signal not detected	I	○	○	○
5	PN_BUSY	BUSY signal from Panel U-Com	High: In exchanging input functions, Low: Normal	I	○	○	○
6	———	No allocation(not used)					
7	CLK2	Clock output for Serial 3 lines	0–5V clock signal: always communicating when power on	O	○	○	○
8	DATA2	Data output for Serial 3 lines	0–5V serial signal: always communicating when power on (both-way communication with Full Auto Zoom IC)	O	○	○	○
9	DTO_SU	Serial data input from SYNC u-com	High: Normal, 0–5V serial signal: During communication	I	○	○	○
10	VOL	Audio volume output	PWM output	O	○	○	—
11	RST RET	Reset Signal from Digital Video Assy (Panel u-com and IP u-com)	High: Normal, Low: In Reset	I	○	○	○
12	———	No allocation (not used)					
13	———	No allocation (not used)					
14	CTS	Not used					
15	REQ_SU	Request to read detected frequency from SYNC u-com	High: Normal, Low: In requesting	I	○	○	○
16	RST_SU	Reset Signal from SYNC u-com	High: Normal, Low: In resetting	I	○	○	○
17	EP_RST	Reset output to E^2PROM	High: In resetting, Low: Normal	O	○	○	○
18	BUSY2	Not used					
19	SCL2	Not used					
20	TXD	RS-232C sending data	0–5V serial signal	O	○	○	○
21	RXD	RS-232C receiving data	0–5V serial signal	I	○	○	○
22	REM	Remote Control unit signal input	High: Normal, 0–5V serial signal: In input from Remote Control unit	I	○	○	○
23	KEY	Key Matrix, Key of the unit input	High: Normal, 0–5V serial signal: In Key input	I	○	○	○
24	CNVSS	Controlling operation mode of u-com of the unit	Low: Normal	I	○	○	○
25	*RST	Reset input	High: Normal, Low: In Reset	I	○	○	○
26	POWER	Power on/off	High: When power on, Low: In Stand-by	O	○	○	○
27	———	No allocation (not used)					
28	X_IN	Clock input	10 MHz sine wave	I	○	○	○
29	X_OUT	Clock output	10 MHz sine wave	O	○	○	○
30	VSS	Power supply terminal	STB GND	I	○	○	○
31	SC_DT (ULK_PLL)	Detecting SYNC Signal output from Analog Assy to Digital Assy	High: existence of Sync signal, Low: non existence	I	○	○	○
32	RTS	Not used					
33	RMT	Signal of request to quit sending commands from Panel u-com	Low: Normal	I	○	○	○
34	PN_ERR	Communication error signal from Panel u-com	Low: Normal	I	○	○	○
35	*PN_RST	Reset signal output to Panel u-com & IP u-com	High: Normal, Low: In Reset	O	○	○	○
36	———	No allocation (not used)					
37	*GRN	Green LED lighting	Low: In lighting Green LED	O	○	○	○
38	*RED	Red LED lighting	Low: In lighting Red LED	O	○	○	○

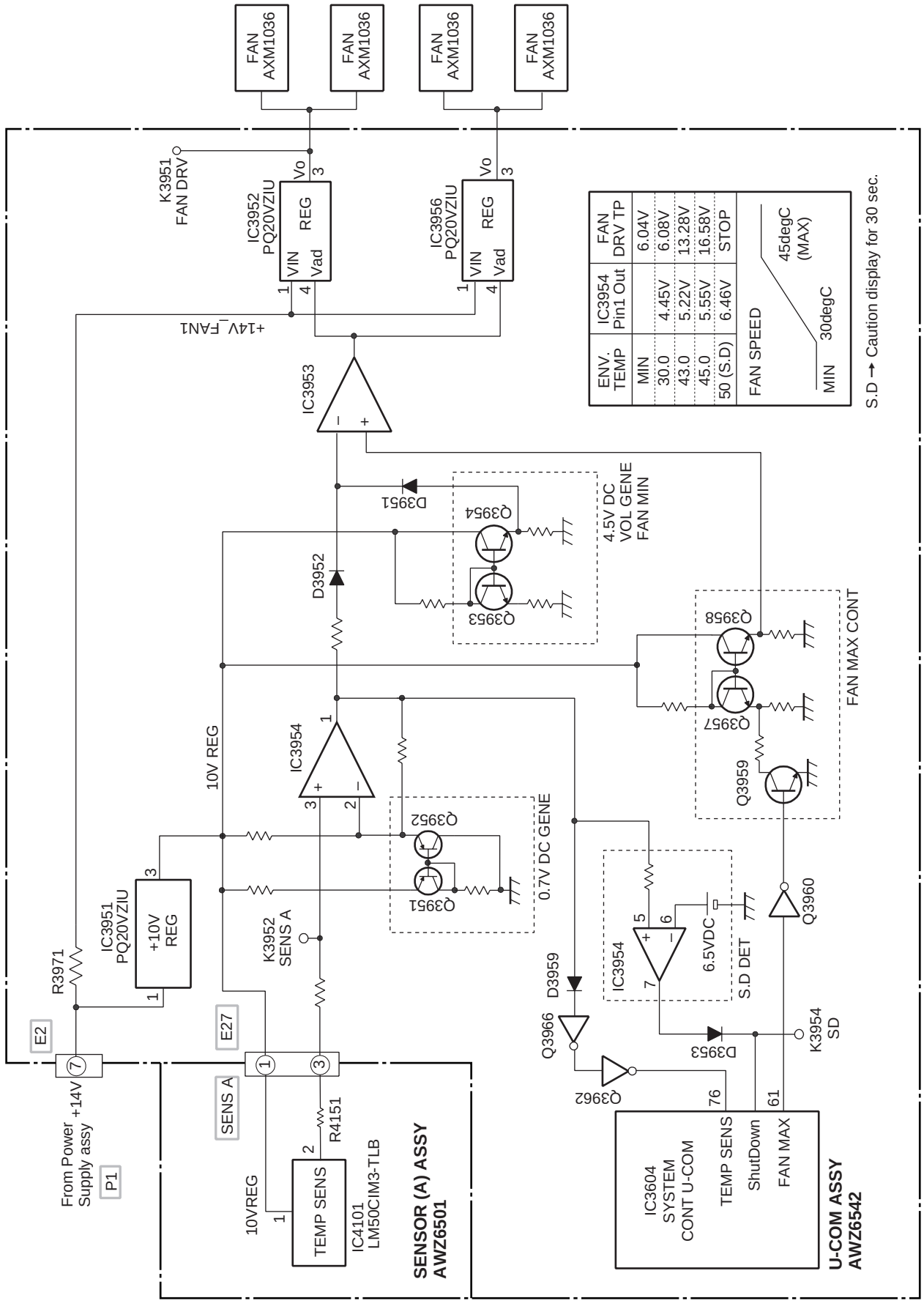
Pin No.	Name	Function	Operation of Terminals (during power on)	I/O	PDP-502MX	PDP-502MXE	PDP-505HD
39	*YLW	Yellow LED lighting	Low: In lighting Yellow LED	O	○	○	○
40	I_DET	Not used					
41	IP_BUSY	BUSY signal from IP u-com	High: At the timing of VD SYNC	I	○	○	○
42	IP_ERR	Communication error signal from IP u-com	Low: Normal	I	○	○	○
43	VPOL_U	Not used					
44	V_MUTE	Analog video mute output	High: When muting, Low: Normal	O	○	○	○
45	(E) SCL	I^2C-BUS Clock for E^2PROM	High: Normal, 0–5V clock signal: During communication	I/O	○	○	○
46	(E) SDA	I^2C-BUS Data for E^2PROM	High: Normal, 0–5V serial signal: During communication	I/O	○	○	○
47	*PN_MUTEX	X Drive Panel mute output	High: Normal, Low: When muting	O	○	○	○
48	*PN_MUTEY	Y Drive Panel mute output	Fixed "High"	O	○	○	○
49	*V_STDO	Not used					
50	STDSW	Not used					
51	*PN_CE	Chip Enable for Panel u-com & IP u-com	High: Normal, Low: During communication	O	○	○	○
52	*PLL_CE	Chip Enable for PLL IC	High: Normal, Low: During communication (Approx.80ms interval)	O	○	○	○
53	*OSD_CE	Chip Enable for OSD IC	High: Normal, Low: During communication	O	—	—	○
54	HPOL_U	Not used					
55	PGM_OE	Not used					
56	*PLD_CE	Chip Enable for PLD (Analog Video Assy)	High: Normal, Low: During communication (Approx.80ms interval)	O	○	○	○
57	*SU_CE	Chip Enable for SYNC u-com	High: Normal, Low: During communication	O	○	○	○
58	*ZOOM_CE	Chip Enable for Full Auto Zoom IC	High: Normal, Low: During communication	O	—	—	○
59	*A_MUTE1	Audio Mute 1	High: Normal, Low: When muting	O	○	○	—
60	*A_MUTE2	Audio Mute 2 Muting audio out	High: Normal, Low: When muting	O	○	○	—
61	FAN_MAX	Command to rotate Fan with max. speed	High: In setting Fan max. speed, Low: Normal	O	○	○	○
62	A_MUTE3	Audio Mute 3 Mute in suspending	High: When muting, Low: Normal	O	○	○	—
63	*OSD_CLR	Reset signal output to OSD IC	High: Normal, Low: In resetting	O	○	○	—
64	OSD_H	OSD Timing Pulse for SYNC processing	Pulse input	I	—	—	○
65	———	No allocation (Not used)					
66	DRV_OFF	Not used					
67	*CB_MUTE	Combination Mute	High: When ID is set, Low: Normal	O	○	○	—
68	REMSW	Not used					
69	PLK_ID	Not used					
70	———	No allocation (not used)					
71	VCC	Power source input	STB +5V	I	○	○	○
72	VREF	Reference voltage input of AD/DA Converters	STB +5V	I	○	○	○
73	AVSS	Analog power input of AD/DA Converters	STBGND	I	○	○	○
74	S_D	Shut down detection for high temperature	High: In high temperature, Low: Normal	I	○	○	○
75	TEMP2	Not used					
76	TEMP	Temperature detection for On screen bar display	0–5V DC value	I	○	○	○
77	———	No allocation (Not used)					
78	———	No allocation (Not used)					
79	———	No allocation (Not used)					
80	PM_ST	Not used					

3.9 MAIN POWER ASSY SECTION

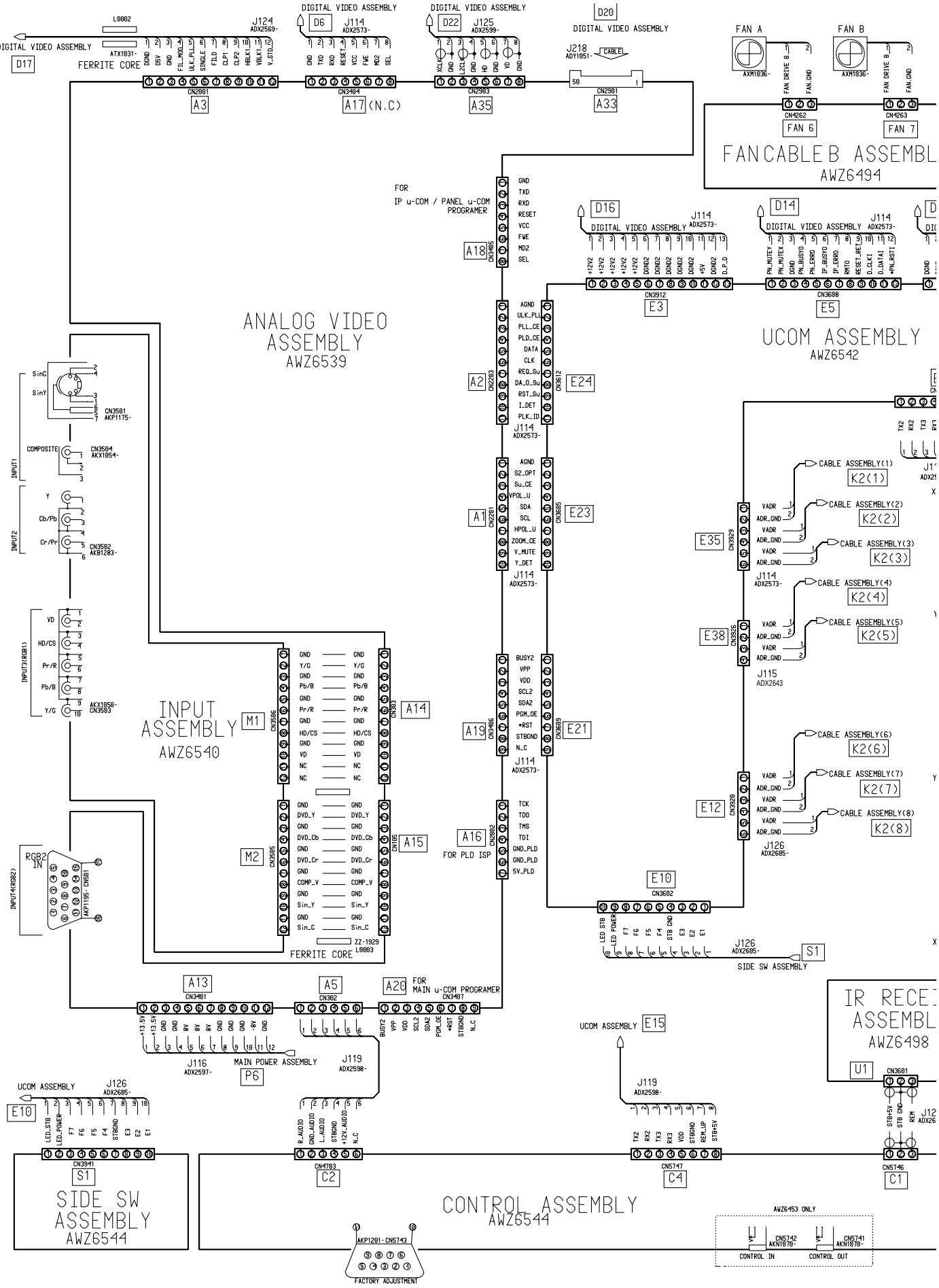


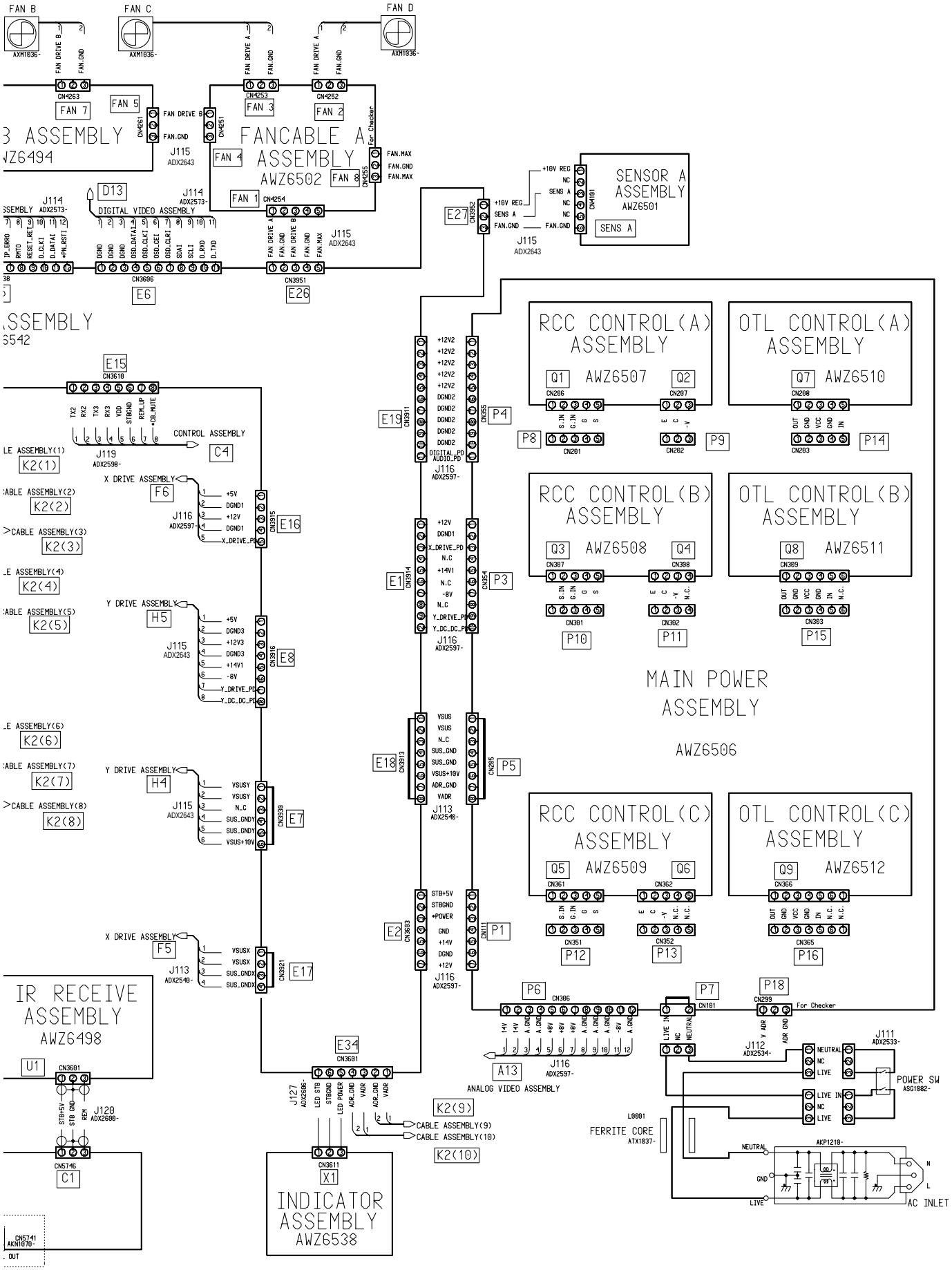

VSUS Discharging R
R228 R227 R226 R262 R263 R264
D213 D212
TP201
VSUS
(170V)
P5
T202
ATK1137
170V
Q202
D202
VSUS+10V
Q201
SW Tr
(2SK2847)
VSUS TRANS
T201
ATK1137
VSUS TRANS
R206
R463
R461
R462
IC403
IC405
Q415
R436
R437
D422
SUS
GND
ADR
GND
To UCOM ASSY
One Shot
IC204
OTL CONT
(A) ASSY
VR201
VSUS
Adj
R268
Q416
VSUS
UVP
VADR
OVP
TP301
VADR
(60V)
10V
SUS
GND
IC202
R210
D205
VSUS
UP
UVP MUTE
Q212
Q213
D421
14V
UP
IC201
R208
Error
AMP
D206
Mute
P6
T301
ATK1138
60V
Q302
DisCharge
Q207, Q206
Q205,
D302
R315
VADR
UVP
D427
Q417
R440
R441
D428
TP351
-8V
A.GND
TP352
+8V
TP355
+14V
-8V
8V
14V
To ANALOG VIDEO ASSY
One Shot
IC304
OTL CONT
(B) ASSY
R306
R348
VR301
VADR
Adj
Q304
Q416
IC404
VADR TRANS
ADR
GND
IC301
D305
Vadr up
D449
IC302
D.GND
12V
To UCOM ASSY
P4
Trig (-V)
T351
ATK1139
12V
Q354
Q351
SW Tr
(2SK2847)
R447
D451
D432
12V
UVP
Q421
D453
R451
Q435
R491
Q419
R444
D431
R493
14V OVP
Q422
R490
-8V UVP
TP353
+12V
D373
-8V
8V
14V
One Shot
IC354
OTL CONT
(C) ASSY
R358
D434
R443
Q420
R445
8V UVP
14V
UVP
D429
D352
D356
IC351
Error
AMP
Comp
R364
R385
Trig
(-V)
14V
D355
14V up
R356
VR356
14V Adj
R358
IC352
R360
R357
IC402
UVP
OVP
14V
-8V
STB +12V
UVP
MUTE
at P.ON
R424
Q407
Q408
D413
D414
UVP
1
2
3
4
10
9
7
14V
5
3
2
1
D.GND
12V
P3
To UCOM ASSY

3.10 FAN CONTROL SECTION

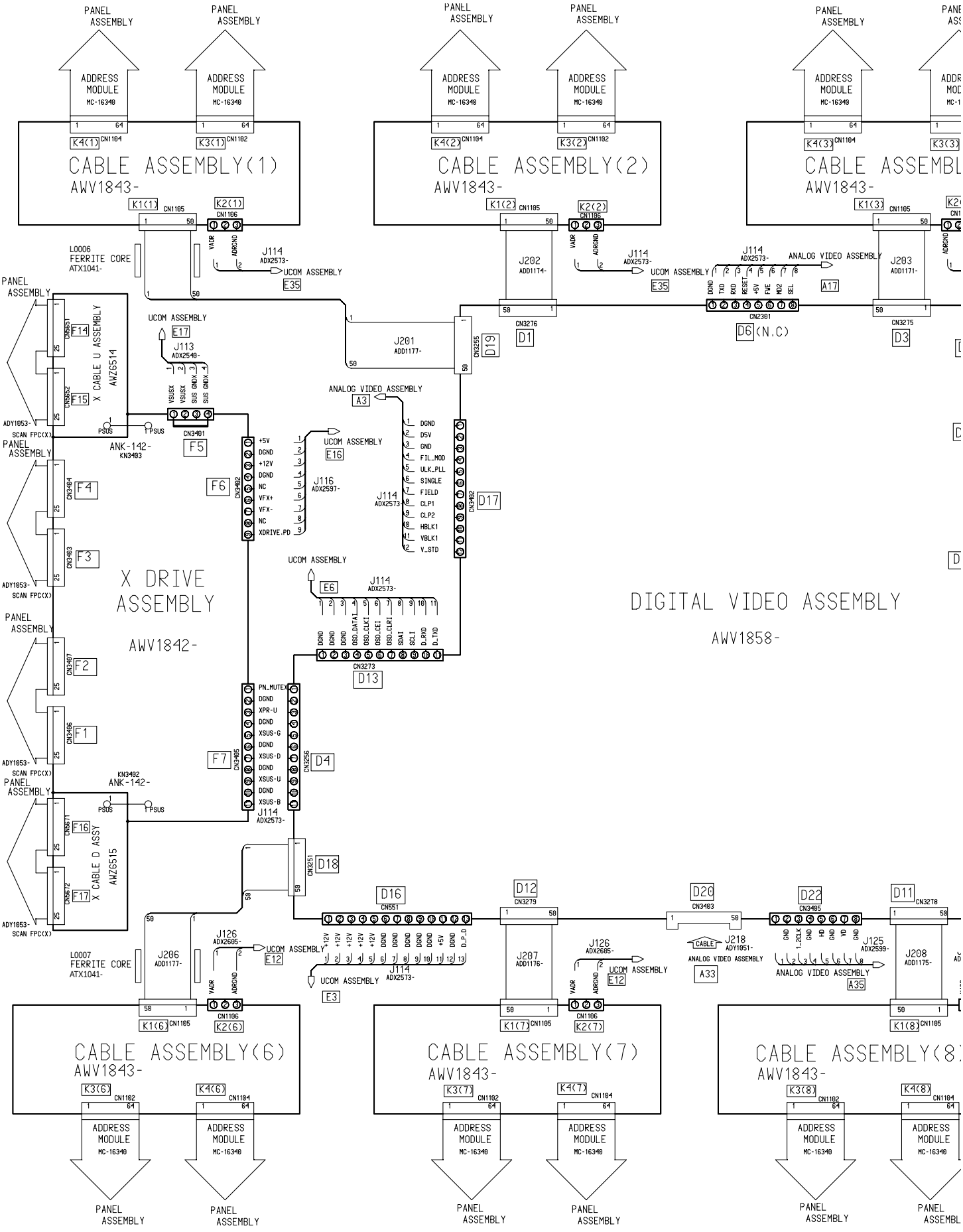


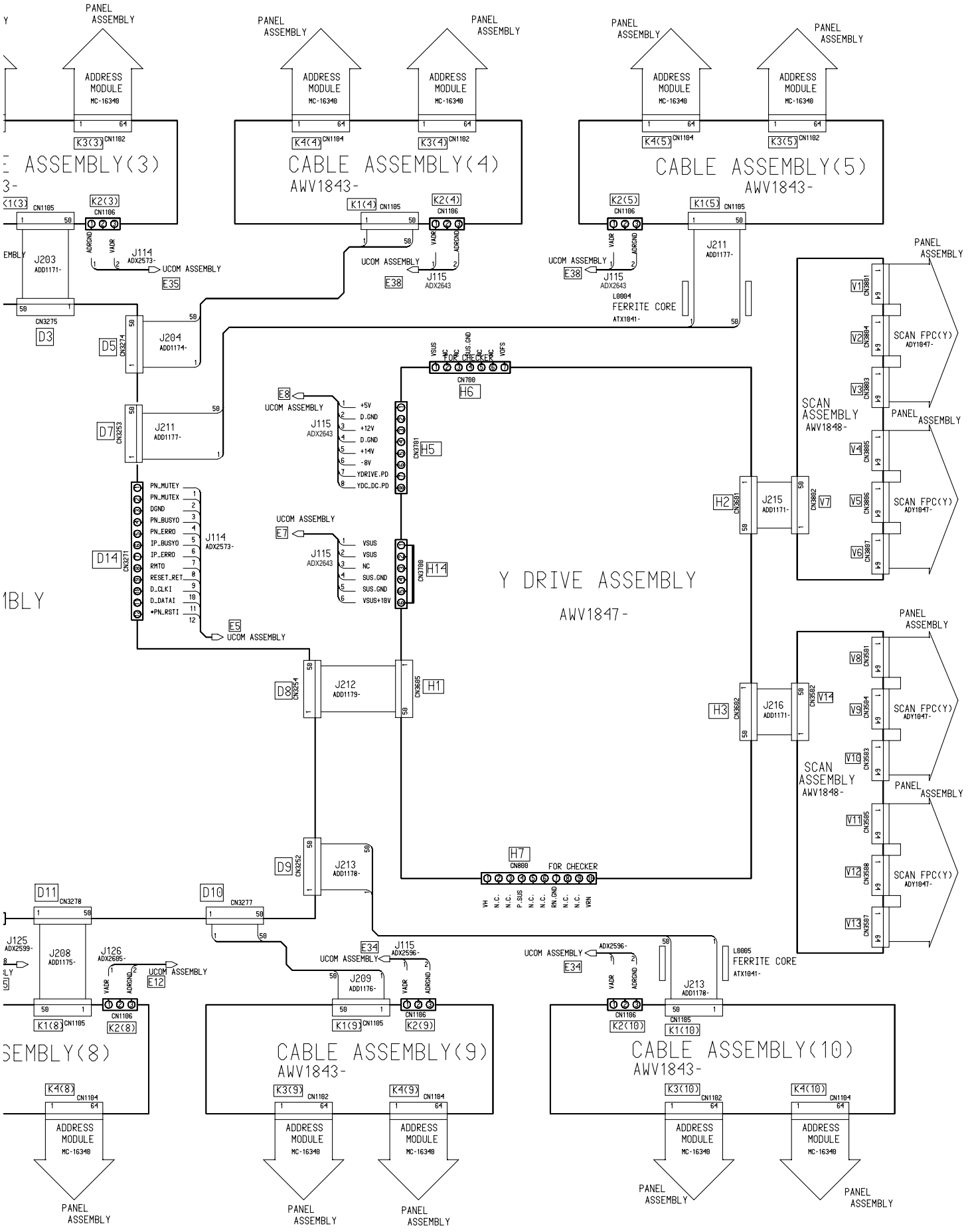
3.11 OVERALL CONNECTION DIAGRAM (1/2)




FAN B
FAN C
FAN D
FAN 7
FAN 5
FAN 3
FAN 2
FAN 4
FAN 8
FAN 1
ASSEMBLY
AWZ6502
DIGITAL VIDEO ASSEMBLY
SENSOR A ASSEMBLY
AWZ6501
SENS A
RCC CONTROL(A) ASSEMBLY
OTL CONTROL(A) ASSEMBLY
RCC CONTROL(B) ASSEMBLY
OTL CONTROL(B) ASSEMBLY
RCC CONTROL(C) ASSEMBLY
OTL CONTROL(C) ASSEMBLY
MAIN POWER ASSEMBLY
AWZ6506
CONTROL ASSEMBLY
X DRIVE ASSEMBLY
Y DRIVE ASSEMBLY
ANALOG VIDEO ASSEMBLY
IR RECEIVE ASSEMBLY
AWZ6498
INDICATOR ASSEMBLY
AWZ6538
POWER SW
FERRITE CORE
AC INLET

3.12 OVERALL CONNECTION DIAGRAM (2/2)




Y DRIVE ASSEMBLY
AWV1847-
CABLE ASSEMBLY(4)
AWV1843-
CABLE ASSEMBLY(5)
AWV1843-
CABLE ASSEMBLY(9)
AWV1843-
CABLE ASSEMBLY(10)
AWV1843-
SCAN ASSEMBLY
AWV1848-
SCAN ASSEMBLY
AWV1848-
PANEL ASSEMBLY
ADDRESS MODULE
MC-16340
SCAN FPC(Y)
ADY1047-
FERRITE CORE
ATX1041-
UCOM ASSEMBLY
FOR CHECKER
J203
J204
J211
J212
J213
J214
J215
J216
J114
J115
J125
J126
J208
J209
CN3275
CN3254
CN3253
CN3271
CN3255
CN3252
CN3278
CN3277
CN3605
CN3606
CN3607
CN3608
CN3609
CN3610
CN3611
CN3612
CN3613
CN3614
CN3615
CN3616
CN3617
CN3618
CN3619
CN3620
CN3621
CN3622
CN3623
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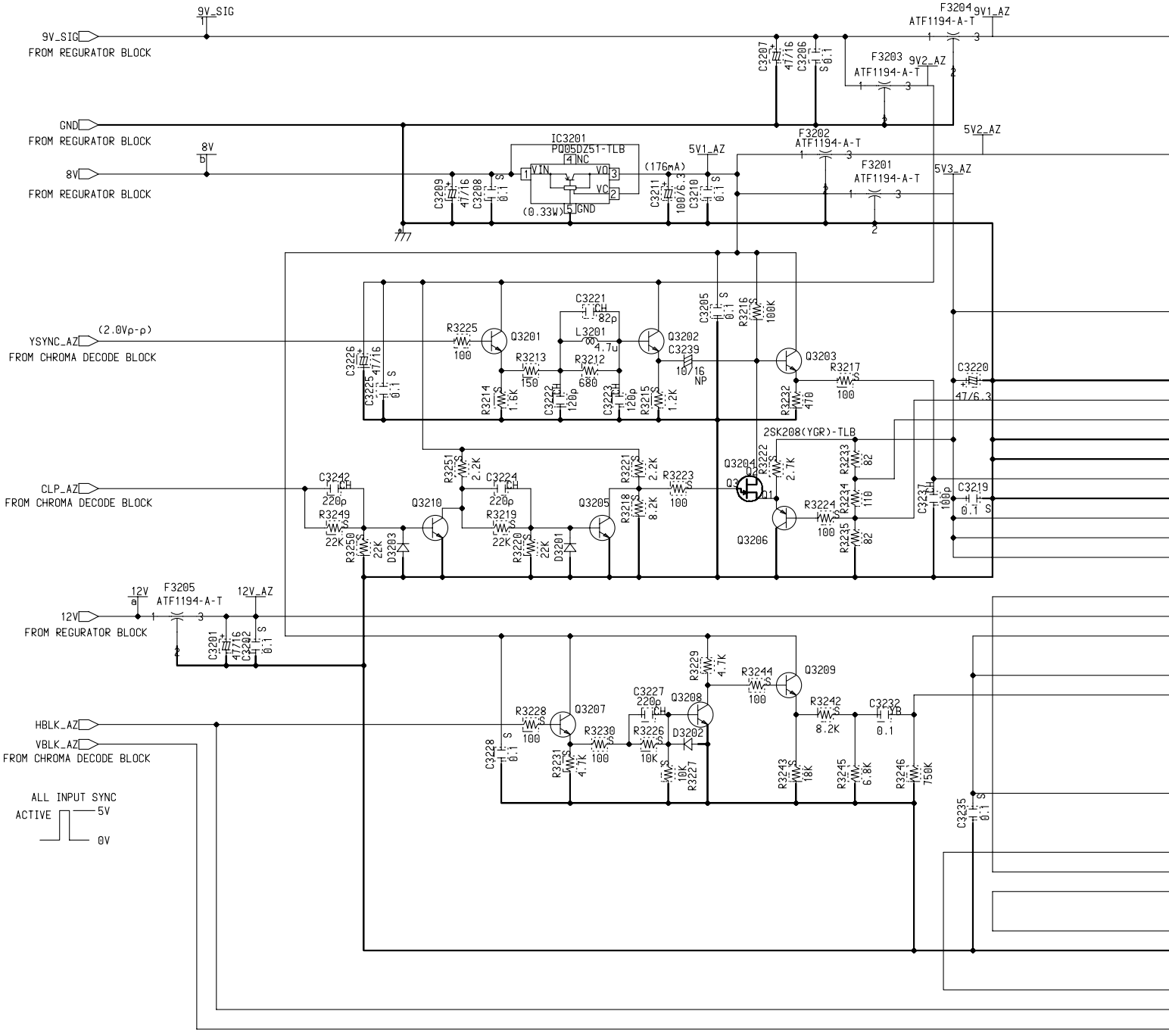
CN3638
CN3639
CN3640
CN3641
CN3642
CN3643
CN3644

Note: As to the other schematic diagrams, refer to the service manual ARP3078 for PDP-502MX/LUCBW/1.

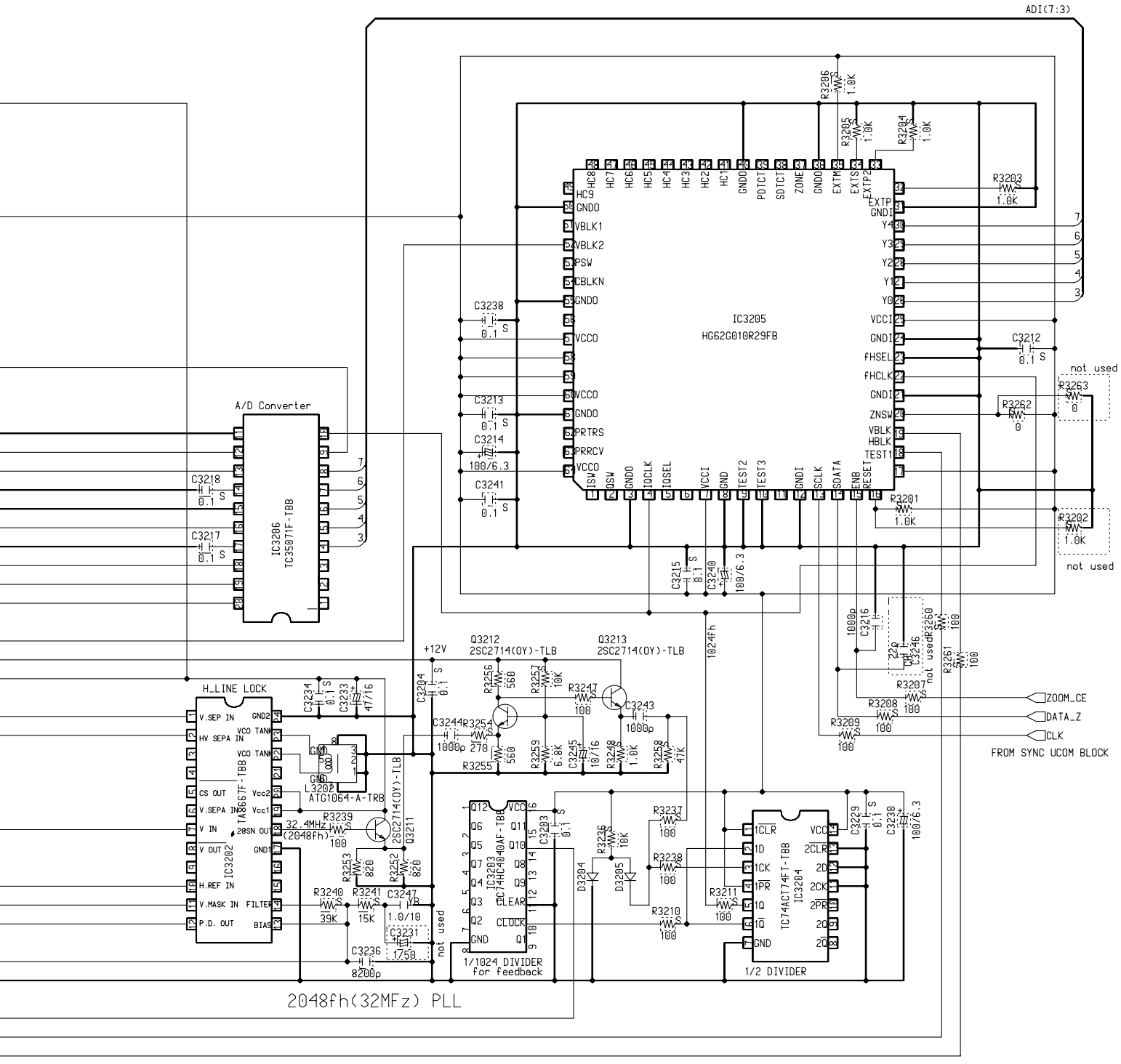
3.13 VIDEO ASSY (AUTO ZOOM BLOCK)



ITEM	USED	VACANT
R	3201-3263	
C	3201-3247	
L	3201-3202	
Q	3201-3213	
D	3201-3205	
IC	3201-3206	

2SC2412K-TLB R/S
2SA1037K-TLB R/S
1SS226-TRB
1SS355-TRB

* Resistor indicated in ohm,1/10W+5% tolerance unless otherwise noted.k:k ohm,M:M ohm
* Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF indication without voltage is 50V except Electrolytic capacitor.
* "S"Marked resistor and capacitor indicated 1608size(1/16W)


ADI(7:3)
IC3205
HG62G010R29FB
A/D Converter
IC3206
TC35071F-TBB
IC3202
TA8667F-TBB
H_LINE LOCK
V.SEP IN
HV SEPA IN
CS OUT
V.SEPA IN
V IN
V OUT
H.REF IN
V.MASK IN
P.D. OUT
32.4MHz
(2048fh)
L3202
ATG1064-A-TRB
Q3212
2SC2714(OY)-TLB
Q3213
2SC2714(OY)-TLB
+12V
IC3203
TC74HC4040AF-TBB
1/1024 DIVIDER
for Feedback
IC3204
TC74ACT74FT-TBB
1/2 DIVIDER
not used
ZOOM_CE
DATA_Z
CLK
FROM SYNC UCOM BLOCK
2048fh(32MFz) PLL

5. PCB PARTS LIST

NOTES :
- *Parts marked by "* NSP *" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560 Ω → 56 × 10 [1] → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 × 10 [3] → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 × 10 [1] → 5621 ..... RN1/4PC 5 6 2 1 F

Mark	No.	Description	Part No.

LIST OF PCB ASSEMBLIES

NSP	ANALOG VIDEO ASSY	AWV1857
	├ VIDEO ASSY	AWZ6539
	├ INPUT ASSY	AWZ6540
	├ FAN CABLE (B) ASSY	AWZ6497
	├ IR RECEIVE ASSY	AWZ6498
	└ INDICATOR ASSY	AWZ6538
	DIGITAL VIDEO ASSY	AWV1858
	X DRIVE ASSY	AWV1842
	CABLE ASSY	AWV1843
NSP	U-COM ASSY	AWV1860
	├ U-COM ASSY	AWZ6542
	├ SIDE SW ASSY	AWZ6543
	├ SENSOR (A) ASSY	AWZ6501
	├ FAN CABLE (A) ASSY	AWZ6502
	└ CONTROL ASSY	AWZ6544
NSP	POWER SUPPLY ASSY	AWV1845
	├ MAIN POWER ASSY	AWZ6506
	├ RCC CONTROL (A) ASSY	AWZ6507
	├ RCC CONTROL (B) ASSY	AWZ6508
	├ RCC CONTROL (C) ASSY	AWZ6509
	├ OTL CONTROL (A) ASSY	AWZ6510
	├ OTL CONTROL (B) ASSY	AWZ6511
	├ OTL CONTROL (C) ASSY	AWZ6512
	├ X CABLE U ASSY	AWZ6514
	└ X CABLE D ASSY	AWZ6515
	Y DRIVE ASSY	AWV1847
NSP	SCAN ASSY	AWV1848
	├ SCAN (A) ASSY	AWZ6518
	└ SCAN (B) ASSY	AWZ6519

VIDEO ASSY

SEMICONDUCTORS

	IC104	24LC01B
	IC507	24LCS21A
	IC1204	BA7655AF
	IC306	BA7657F
	IC2301	CXA1875AM
	IC1401	CXA2101AQ
	IC2402	CXA3506R
	IC3205	HG62G010R29FB
	IC2002	M52346SP
	IC1105, IC1106	ML6428CS–1
	IC1102	MSM5416258B–30JD
	IC1651	NJM072BM–E
	IC1207, IC307	NJM2234M
	IC1205	NJM319M
	IC301, IC303, IC501, IC503	NJM360M
	IC2201	PD2060A
	IC2005	PDY069C
	IC1103, IC2401, IC2407, IC3201	PQ05DZ51
	IC3401–IC3403, IC3407	PQ05DZ51
	IC3405, IC3406	PQ09DZ11
	IC3404	PQ12DZ11
	IC2406, IC2901	PQ3DZ13
	IC1104	PQ3DZ53
	IC2203	PST9146N
	IC3408	TA79L05F
	IC3202	TA8667F
	IC1201	TB1227BN
	IC3206	TC35071F
	IC102	TC4052BF
	IC2205	TC74AC08F
	IC3204	TC74ACT74FT
	IC3203	TC74HC4040AF
	IC1601	TC74HC4053AF
	IC1202	TC74HC4538AF
	IC2902–IC2908	TC74LCX541FT
	IC2004	TC74VHC123AFT
	IC1206, IC2003, IC2007, IC2202, IC305	TC74VHCT541AFT
	IC504	TC7SET08FU
	IC2408	TC7W04FU
	IC2006	TC7WU04FU
	IC1107	TK15420M
	IC1101	UPD64082GF–3BA
	Q101, Q1102–Q1104, Q1107	2SA1037K
	Q111, Q118, Q1222, Q1401–Q1404	2SA1037K
	Q1407, Q1601, Q1604, Q1609, Q1652	2SA1037K

Mark	No.	Description	Part No.
	Q1654–Q1656, Q2004, Q2008		2SA1037K
	Q2404–Q2406, Q306, Q308–Q310		2SA1037K
	Q3206		2SA1037K
	Q710, Q714, Q716, Q720, Q722		2SA1037K
	Q102–Q110, Q1101, Q112–Q114		2SC2412K
	Q1105, Q115, Q116, Q1201–Q1203		2SC2412K
	Q1206–Q1208, Q1210, Q1214–Q1219		2SC2412K
	Q1221, Q1223–Q1225, Q1405, Q1406		2SC2412K
	Q1408, Q1409, Q1501–Q1512		2SC2412K
	Q1602, Q1603, Q1605–Q1608, Q1651		2SC2412K
	Q1657, Q2001, Q2003, Q2403		2SC2412K
	Q2407–Q2417, Q302, Q304, Q3204		2SC2412K
	Q3201–Q3203, Q3205, Q3207–Q3210		2SC2412K
	Q502, Q504, Q701–Q709		2SC2412K
	Q712, Q713, Q715, Q717–Q719		2SC2412K
	Q721		2SC2412K
	Q3211–Q3213		2SC2714
	Q711		2SK208
	Q1516, Q2009		DTA124EK
	Q1106, Q1513, Q1610, Q1611, Q1653		DTC124EK
	Q1701, Q1702, Q2005, Q2007		DTC124EK
	Q301, Q303, Q312–Q314		UMY1N
	Q316–Q318, Q501, Q503		UMY1N
	Q506		UMY1N
	D108–D110		1SS226
	D301–D305, D307, D309		1SS226
	D311–D313, D315–D317, D502		1SS226
	D504–D507, D510, D511, D514, D515		1SS226
	D102, D111		1SS355
	D1201–D1203, D1401–D1403, D1601		1SS355
	D2005, D2006, D2010, D2201		1SS355
	D2401–D2404, D306, D308, D501		1SS355
	D503, D512, D521, D701		1SS355
	D3201–D3205		1SS355
	D513		RD6.8MB

COILS AND FILTERS

	F1001–F1004, F1101, F1102	ATF1194
	F1104–F1106, F1108, F1701	ATF1194
	F2001, F2002, F2004, F2401–F2407	ATF1194
	F3201–F3205, F3401–F3403 (1µF)	ATF1194
	L3202	ATG1064
	DL701	ATN1045
	L1102	ATX1008
	L101, L1202–L1205	LCTA2R2J2520
	L1101, L3201	LCTA4R7J2520
	L706	LCTA5R6J2520
	L701, L704	LCTA6R8J2520
	L705	LCTA8R2J2520
	L702	LCYA120J2520
	L301, L302, L501, L502, L703	LCYA470J2520
	L1201	LCYA560J2520

CAPACITORS

	C2500 (0.33µF/16V)	ACE1129
	C1202, C1263, C2478 (0.47µF/16V)	ACE1130
	C2074, C2075	CCSQCH100D50
	C2219, C2443, C3237	CCSQCH101J50
	C1228	CCSQCH120J50
	C3222, C3223, C711, C715	CCSQCH121J50
	C2031, C2032, C714	CCSQCH151J50
	C1115, C1116, C1287	CCSQCH180J50
	C2077, C2078, C2208, C2209	CCSQCH220J50
	C1239, C2013, C2021, C2213, C3224	CCSQCH221J50
	C3227, C3242, C710	CCSQCH221J50
	C2935, C2936	CCSQCH270J50
	C1268, C1269, C1608, C1609, C716	CCSQCH271J50
	C1148, C2056	CCSQCH391J50
	C2076, C2207, C2220, C2221	CCSQCH470J50
	C1149, C1235, C1236, C2212	CCSQCH471J50
	C3221	CCSQCH820J50
	C709	CCSQCH821J50
	C1216	CCSQSL102J50
	C712	CCSQSL122J50
	C2499	CCSQSL331J50
	C2503–C2505	CCSRCH101J50
	C2475–C2477	CCSRCH121J50
	C2501	CCSRCH220J50
	C3422, C3423, C3425, C3427, C3429	CEHAQ471M25
	C102, C1124, C1229, C1240, C1241	CEV100M16
	C1258, C1260, C1262, C1266, C1272	CEV100M16
	C1426–C1428, C1439, C1460, C1503	CEV100M16
	C1506, C1509, C1652, C1658, C2027	CEV100M16
	C2470, C2479, C311, C320, C3245	CEV100M16
	C502, C510, C707, C718	CEV100M16
	C1112, C1123	CEV101M6R3
	C1137, C1139, C1142, C2007, C2059	CEV101M6R3
	C2064, C2210, C2404, C2411, C2414	CEV101M6R3
	C2417, C2421, C2422, C2425, C2432	CEV101M6R3
	C2434, C2436, C2441, C2452, C2454	CEV101M6R3
	C2484, C2492–C2494, C2940, C3211	CEV101M6R3
	C3214, C3230, C3240, C338	CEV101M6R3
	C3407–C3409, C3432	CEV101M6R3
	C2023	CEV1R0M50
	C105, C1136, C1141, C1158	CEV220M16
	C1238, C1250, C1252, C1274, C1282	CEV220M16
	C1288, C1289, C133, C134	CEV220M16
	C1510, C1512, C1514, C1653, C312	CEV220M16
	C321, C339, C340, C503, C511	CEV220M16
	C708, C719, C723, C732, C734	CEV220M16
	C1120, C1128, C113, C1147	CEV220M6R3
	C1276, C1277, C2068, C327, C349	CEV220M6R3
	C538	CEV220M6R3
	C2402, C2482, C2938	CEV221M10
	C1215, C1234, C2071	CEV2R2M50
	C1159, C1201, C1207, C1210, C1226	CEV470M16
	C1230, C1246, C1420, C1424, C1456	CEV470M16
	C1459, C1525, C1603, C1605, C1651	CEV470M16
	C1656, C1705, C2001, C2003, C2012	CEV470M16
	C2490, C3201, C3226, C3410, C3411	CEV470M16

Mark	No.	Description	Part No.
	C3413, C3415, C3417, C3419, C3424		CEV470M16
	C3426, C3428, C537, C703, C705		CEV470M16
	C729, C3207, C3209, C3233		CEV470M16
	C1117, C1144, C116, C118		CEV470M6R3
	C1279, C2033, C2052, C2072		CEV470M6R3
	C2201, C2218, C2303, C2406, C2408		CEV470M6R3
	C2486, C2488, C2901, C2902, C316		CEV470M6R3
	C3220, C335, C342, C350, C506, C528		CEV470M6R3
	C103, C1211, C1224, C139, C2024		CEV4R7M35
	C2026, C2216		CEV4R7M35
	C1261, C3239, C717		CEVNP100M16
	C109, C110, C140–C142, C1516–C1518		CEVNP470M10
	C301, C303, C304, C307, C308, C319		CEVNP470M10
	C332–C334, C358, C361, C363		CEVNP470M10
	C509, C520, C522, C524		CEVNP470M10
	C310, C501		CEVNP4R7M16
	C1218, C1223		CFHSP104J16
	C112, C1220, C1225, C1232, C2057		CFHSQ103J16
	C302, C305, C306, C329–C331		CFHSQ103J16
	C357, C360, C362, C519, C521		CFHSQ103J16
	C523		CFHSQ103J16
	C2022		CFHSQ472J16
	C3216, C3243, C3244		CKSQYB102K50
	C101, C1119, C1156		CKSQYB103K50
	C1203–C1206, C1208, C1209, C1227		CKSQYB103K50
	C1231, C132, C1519–C1521, C706		CKSQYB103K50
	C722, C735		CKSQYB103K50
	C1109, C1153–C1155		CKSQYB104K25
	C1217, C1423, C1443, C1445–C1447		CKSQYB104K25
	C1701–C1703, C2005, C2020		CKSQYB104K25
	C2438–C2440, C2458, C2459, C2467		CKSQYB104K25
	C2469, C2471, C2473		CKSQYB104K25
	C1163–C1165		CKSQYB105K10
	C1212–C1214, C1243, C1281		CKSQYB105K10
	C1284, C1285, C1410, C1412		CKSQYB105K10
	C1415–C1419, C1453, C1454, C2410		CKSQYB105K10
	C2455, C3247		CKSQYB105K10
	C1452		CKSQYB222K50
	C713		CKSQYB392K50
	C359		CKSQYB471K50
	C1461–C1474		CKSQYB474K16
	C3236		CKSQYB822K16
	C2460–C2462		CKSRYB104K16
	C2054		CKSRYF103Z50
	C104		CKSRYF104Z16
	C106, C1101–C1108		CKSRYF104Z16
	C1110, C1111, C1113, C1114, C1118		CKSRYF104Z16
	C1121, C1122, C1125–C1127		CKSRYF104Z16
	C1129–C1131, C1133–C1135, C1138		CKSRYF104Z16
	C114, C1140, C1143, C1145, C1146		CKSRYF104Z16
	C115, C1151, C1157, C117		CKSRYF104Z16
	C119–C121, C1233, C1237		CKSRYF104Z16
	C1244, C1245, C1247–C1249, C1251		CKSRYF104Z16
	C1253–C1257, C1259, C1264, C1265		CKSRYF104Z16
	C1267, C1270, C1273, C1275, C1278		CKSRYF104Z16

Mark	No.	Description	Part No.
	C128, C1280, C1283, C1286, C129		CKSRYF104Z16
	C1290, C136, C137, C1413		CKSRYF104Z16
	C1421, C1422, C1425, C1430–C1438		CKSRYF104Z16
	C1441, C1442, C1444, C1448–C1450		CKSRYF104Z16
	C1455, C1457, C1458, C146–C149		CKSRYF104Z16
	C1501, C1502, C1504, C1505		CKSRYF104Z16
	C1507, C1508, C1511, C1513, C1515		CKSRYF104Z16
	C1522–C1524, C1526, C1601, C1602		CKSRYF104Z16
	C1604, C1606, C1607, C1654, C1655		CKSRYF104Z16
	C1657, C1704, C2002, C2004, C2006		CKSRYF104Z16
	C2008, C2011, C2025, C2028, C2029		CKSRYF104Z16
	C2034, C2053, C2058, C2060–C2063		CKSRYF104Z16
	C2065–C2067, C2069, C2070, C2073		CKSRYF104Z16
	C2079, C2202–C2204, C2211, C2214		CKSRYF104Z16
	C2217, C2302, C2401, C2403, C2405		CKSRYF104Z16
	C2407, C2412, C2413, C2415, C2416		CKSRYF104Z16
	C2418–C2420, C2423, C2424		CKSRYF104Z16
	C2426–C2431, C2433, C2435, C2437		CKSRYF104Z16
	C2442, C2444, C2448, C2449, C2453		CKSRYF104Z16
	C2456, C2457, C2463, C2466, C2468		CKSRYF104Z16
	C2480, C2481, C2483, C2485, C2487		CKSRYF104Z16
	C2489, C2491, C2495, C2496		CKSRYF104Z16
	C2903–C2908, C2934, C2937, C2939		CKSRYF104Z16
	C309, C314, C315, C3202–C3206		CKSRYF104Z16
	C3208, C3210, C3212, C3213, C3215		CKSRYF104Z16
	C3217–C3219, C3225, C3228, C3229		CKSRYF104Z16
	C3232, C3234, C3235, C3238, C3241		CKSRYF104Z16
	C323, C328		CKSRYF104Z16
	C336, C337, C3401–C3406, C341		CKSRYF104Z16
	C3412, C3414, C3416, C3418, C3420		CKSRYF104Z16
	C3421, C343, C3430, C3431		CKSRYF104Z16
	C3433–C3435, C353, C366–C374		CKSRYF104Z16
	C376, C377, C379, C505, C513, C515		CKSRYF104Z16
	C527, C530, C536, C539		CKSRYF104Z16
	C544, C546, C547		CKSRYF104Z16
	C701, C702, C704, C720, C721		CKSRYF104Z16
	C724–C728, C730, C731, C733		CKSRYF104Z16
	C736, C737		CKSRYF104Z16

RESISTORS

	R1181	ACN1147
	R2465	ACN1148
	R2479	ACN1149
	R2042, R2153–R2158, R2241, R2245	RAB4C101J
	R2248, R2254, R2261, R2278	RAB4C101J
	R2452–R2463	RAB4C101J
	R2226–R2231, R2296	RAB4C103J
	R3115–R3126	RAB4C220J
	R2312, R2901–R2912	RAB4C470J
	R2020	RAB4C471J
	R2406	RN1/16SE3001D
	R2485	RN1/16SE3301D
	R3425–R3427	RS1/10S0R0J
	R1657	RS1/10S1001F
	R306, R317, R507, R519	RS1/10S1002F

Mark	No.	Description	Part No.
	R1664		RS1/10S1102F
	R3234		RS1/10S111J
	R1672		RS1/10S1300F
	R1225, R2079		RS1/10S1502F
	R3213		RS1/10S151J
	R1142, R1143		RS1/10S152J
	R1233, R1234, R1256, R1257		RS1/10S152J
	R1316, R1317, R1502, R1505, R1514		RS1/10S152J
	R1517, R1526, R1529, R1540–R1545		RS1/10S152J
	R1547, R1548, R1550, R1551		RS1/10S152J
	R1553, R1554, R1624, R1626, R1627		RS1/10S152J
	R1635, R1637, R1662, R346		RS1/10S152J
	R102		RS1/10S154J
	R1665		RS1/10S1602F
	R1656		RS1/10S1802F
	R1501, R1513, R1525		RS1/10S181J
	R716, R718		RS1/10S182J
	R1227, R1409		RS1/10S2202F
	R1125		RS1/10S224J
	R1222		RS1/10S244J
	R3254		RS1/10S271J
	R755		RS1/10S301J
	R1673		RS1/10S3300F
	R310, R321, R511, R542		RS1/10S3301F
	R2086		RS1/10S3302F
	R1272, R1273, R1318, R1338		RS1/10S331J
	R1630, R2151, R304, R315, R505		RS1/10S331J
	R517, R702, R710, R728, R748		RS1/10S331J
	R1217, R1259, R1271, R1275, R1279		RS1/10S332J
	R1289, R1309		RS1/10S332J
	R1403		RS1/10S335J
	R701		RS1/10S3900F
	R307, R318, R508, R520		RS1/10S4701F
	R1402		RS1/10S4702F
	R2085		RS1/10S4703F
	R1157, R1162, R1163		RS1/10S471J
	R1174, R1218, R1265		RS1/10S471J
	R1333, R1336, R1401, R163, R167		RS1/10S471J
	R198, R201, R2073, R3232, R343		RS1/10S471J
	R348, R388, R705, R726, R737		RS1/10S471J
	R758		RS1/10S471J
	R3229		RS1/10S472J
	R386		RS1/10S474J
	R309, R510		RS1/10S5601F
	RR3255, R3256		RS1/10S561J
	R112		RS1/10S562J
	R2026, R2027		RS1/10S563J
	R320, R544		RS1/10S6201F
	R104		RS1/10S623J
	R1663		RS1/10S6801F
	R184, R186, R715, R3212, R736		RS1/10S681J
	R113, R1448, R714, R721, R735		RS1/10S682J
	R3245, R3259		RS1/10S682J
	R337		RS1/10S683J

Mark	No.	Description	Part No.
	R204–R206		RS1/10S750J
	R523–R525		RS1/10S750J
	R704		RS1/10S751J
	R1219		RS1/10S752J
	R305, R506		RS1/10S753J
	R3246		RS1/10S754J
	R3233, R3235		RS1/10S820J
	R1655		RS1/10S8201F
	R711, R717, R3252, R3253		RS1/10S821J
	R2025, R316, R518		RS1/10S823J
	R2412, R2517		RS1/16S2201F
	R2411		RS1/16S2701F
	R2516		RS1/16S5600F
	R1178		RS1LMF1R5J
	R3405, R3413		RS1LMF1R8J
	R3404		RS2LMF1R8J
	R2464, R3421		RS3LMF2R2J
	R3420		RS3LMF6R8J
	Other Resistors		RS1/16S □□□J

OTHERS

	J2401	WIRE	ADX2641
	J2402	WIRE	ADX2642
	CN501	15PD–SUB SOCKET	AKP1195
	K1202–K1205, K1401, K1651, K1652		AKX9002
	K2004, K2005, K2012–K2015		AKX9002
	K2018–K2034, K2201–K2206		AKX9002
	K2208–K2212, K2401, K2402		AKX9002
	K2404–K2422, K2426, K2427		AKX9002
	K2430–K2434, K2901–K2904		AKX9002
	X1101 (20MHz)		ASS1143
	X2001 (16.0MHz)		ASS1145
	X1201 (16.2MHz)		ASS1152
	CN2201	CONNECTOR	B10B–PH–SM3
	CN2903	CONNECTOR	B8B–PH–SM3
	CN3406, CN3407	CONNECTOR	B9B–PH–SM3
	CN2901		DKC1006

INPUT ASSY

SWITCHES AND RELAYS

	S3501		ASH1029

CAPACITORS

	C3501		CKSQYB473K50

RESISTORS

	R3506, R3507		RS1/10S0R0J
	R3512, R3515		RS1/16S222J
	Other Resistors		RS1/10S □□□J

OTHERS

	CN3502		AKB1283
	CN3501		AKP1175
	CN3503	CONNECTOR	AKX1050
	3504		AKX1054

Mark	No.	Description	Part No.

FAN CABLE (B) ASSY

CAPACITORS

	C4261		CEV470M16

IR RECEIVE ASSY

SEMICONDUCTORS

	IC3601		SBX8035–H
	Q3601		2SC2712
	D3601–D3603		1SS352

CAPACITORS

	C3604		CEV470M6R3
	C3603		CKSQYB472K50
	C3601		CKSRYB103K50
	C3602		CKSRYF104Z16

RESISTORS

	Other Resistors		RS1/16S □□□J

OTHERS

	CN3601	3P PH CONNECTOR	B3B–PH–SM3

INDICATOR ASSY

SEMICONDUCTORS

	D3611		AEL1170

OTHERS

	CN3611	3P PH CONNECTOR	S3B–PH–SM3

DIGITAL VIDEO ASSY

SEMICONDUCTORS

	IC3401, IC3402		74LCX125MTC
	IC2901–IC2910, IC3001–IC3010		74LCX541MTC
	IC3203, IC3204, IC3305, IC3308, IC3309		74LCX541MTC
	IC3311–IC3313		74LCX541MTC
	IC3304, IC3307, IC3316		74VHC541MTC
	IC2202, IC3202		74VHC74MTC
	IC1802, IC2313, IC3101–IC3104		74VHCT541AMTC
	IC3301–IC3303		74VHCT541AMTC
	IC2257		74VHCT541MTC
	IC3205		FS741BZB
	IC2001, IC2301		HD64F3067RF20
	IC551, IC601		LTC1435ACS
	IC2305		MM74HC08SJ
	IC2304		MM74HC4053SJ
	IC1951, IC1952, IC2602, IC2603		MS82V16520–8GA
	IC2702, IC2703, IC2802, IC2803		MS82V16520–8GA
	IC3403		NC7S04P5
	IC2310, IC2311		NC7S32M5
	IC2307, IC2309		NC7ST00P5
	IC2308, IC2312		NC7ST08P5
	IC2252		PD0264AM
	IC2260		PDY061A
	IC2101		PE5061A
	IC2151		PE5062A
	IC2601, IC2701, IC2801		PE5063A
	IC2201		PE5064A
	IC1901		PE5066A
	IC1801		PE5067A
	IC2302		PST9146N
	IC2306		TC7W04FU
	IC2303		TC7W14FU
	Q3101		2SA1162
	Q2301, Q2302, Q3102–Q3104		2SC2712
	Q551–Q553, Q601–Q603		2SC2712
	Q554, Q555		RES100N03
	Q604, Q605		TPC8003
	D2304, D2305		1SS184
	D2301, D2303, D3101–D3103		1SS355
	D555, D556, D605, D606		1SS355
	D2302, D2306		AEL1171
	D551, D552, D601, D602		D1FS4
	D604		RD2.2MB
	D554		RD3.6MB
	D603		RD5.1MB
	D553		RD6.8MB

COILS AND FILTERS

	F1801, F1901, F2101, F2151, F2201		ATF1194
	F2601, F2602, F2701, F2702		ATF1194
	F2801, F2802, F3201		ATF1194
	L551 (10µH)		ATH1069
	L601, L602 (22µH)		ATH1083
	L3201		LCTA1R0J2520
	L3202		LCTA1R2J2520
	L2251		LCTA8R2J3225

SWITCHES AND RELAYS

	S2301		ASG9003
	S2303		ASH1047

CAPACITORS

	C551, C552, C601, C602 (82µF/16V)		ACH1326
	C570, C571, C620–C622 (150µF/6.3V)		ACH1327
	C562, C612		CCSQSL102J50
	C2001, C2008–C2014, C2309–C2313		CCSRCH101J50
	C2315, C561, C563, C611, C613		CCSRCH101J50
	C3211		CCSRCH121J50
	C2256, C2329–C2335		CCSRCH220J50
	C559, C609		CCSRCH331J50
	C1916		CCSRCH390J50
	C560, C610		CCSRCH470J50
	C557, C607		CCSRCH560J50
	C2307, C2308		CCSRCH7R0D50

Mark	No.	Description	Part No.
	C3219, C3220		CCSRCJ3R0C50
	C3107, C3108, C3217		CEHV100M16
	C3106, C566, C568, C616, C618		CEHV101M16
	C1801, C1802, C1901, C1902		CEHV101M6R3
	C1963–C1966, C2002, C2003		CEHV101M6R3
	C2101, C2102, C2151, C2152		CEHV101M6R3
	C2201, C2202, C2264, C2265, C2274		CEHV101M6R3
	C2276, C2316, C2317, C2601, C2605		CEHV101M6R3
	C2607, C2609, C2611, C2613, C2701		CEHV101M6R3
	C2705, C2707, C2709, C2711, C2713		CEHV101M6R3
	C2801, C2805, C2807, C2809, C2811		CEHV101M6R3
	C2813, C2911, C2912, C3011, C3012		CEHV101M6R3
	C3104, C3201, C3203, C3205, C2270		CEHV101M6R3
	C3401		CEHV470M10
	C2303, C3210, C554, C604		CEHV4R7M35
	C3109, C553, C555, C556, C558		CKSQYB104K25
	C564, C565, C567, C569, C603		CKSQYB104K25
	C605, C606, C608, C614, C615		CKSQYB104K25
	C617, C619		CKSQYB104K25
	C2019, C2020, C2314, C2344, C2345		CKSRYB102K50
	C2018, C2021, C2338, C2343		CKSRYB103K50
	C2346		CKSRYB103K50
	C2259–C2262		CKSRYB152K50
	C2281–C2284		CKSRYB222K50
	C2017, C2263, C2301, C2302		CKSRYF103Z50
	C2304–C2306, C2323, C2324		CKSRYF103Z50
	C1803–C1818, C1903–C1915		CKSRYF104Z16
	C1951–C1962, C1967–C1978		CKSRYF104Z16
	C2004–C2007, C2103–C2112		CKSRYF104Z16
	C2153–C2164, C2203–C2208		CKSRYF104Z16
	C2266, C2268, C2269, C2275, C2277		CKSRYF104Z16
	C2278, C2287–C2289, C2318–C2322		CKSRYF104Z16
	C2325–C2328, C2336, C2337, C2271		CKSRYF104Z16
	C2602–C2604, C2606, C2608, C2610		CKSRYF104Z16
	C2612, C2614–C2645, C2702–C2704		CKSRYF104Z16
	C2706, C2708, C2710, C2712		CKSRYF104Z16
	C2714–C2745, C2802–C2804, C2806		CKSRYF104Z16
	C2808, C2810, C2812, C2814–C2845		CKSRYF104Z16
	C2901–C2910, C3001–C3010		CKSRYF104Z16
	C3101–C3103, C3105, C3202, C3204		CKSRYF104Z16
	C3206, C3209, C3213, C3214, C3218		CKSRYF104Z16
	C3301–C3305, C3307–C3309		CKSRYF104Z16
	C3311–C3313, C3316, C3402		CKSRYF104Z16
	C3413–C3415		CKSRYF104Z16

RESISTORS

R562 (0.022Ω, 1W)		ACN1137
R612 (0.015Ω, 2W)		ACN1143
R2901–R2920, R3001–R3020		RAB4C0R0J
R1857, R1858, R2253, R2263		RAB4C220J
R2265–R2267, R2294, R2295		RAB4C220J
R3360, R3361, R3369, R3370		RAB4C220J
R2354		RAB4C222J
R1855, R1856, R2001, R2002		RAB4C470J
R2010, R2011, R2015, R2027, R2031		RAB4C470J
R2203–R2226, R2256, R2272, R2273		RAB4C470J
R2315, R2318, R2319, R2333–R2335		RAB4C470J
R2338, R2352, R2353, R3101–R3108		RAB4C470J
R3328–R3355		RAB4C470J
R2012, R2013, R2308–R2311, R2313		RAB4C472J
R2324, R2337, R2340, R2355		RAB4C472J
R3373–R3376, R3379–R3382		RAB4C472J
R602		RN1/10SE2002D
R3247		RS1/10S100J
R610		RS1/10S102J
R553, R561, R603, R611		RS1/10S103J
R555, R557, R605, R607		RS1/10S122J
R560		RS1/10S222J
R551, R601		RS1/10S3302F
R554, R556, R558, R559, R604		RS1/10S472J
R606, R608, R609		RS1/10S472J
R552		RS1/10S8201F
VR552, VR602 (10kΩ)		ACP1092
Other Resistors		RS1/16S □□□J

OTHERS

3417	PCB SPACER	AEC1832
CN3251–CN3255, CN3274–CN3279		AKM1180
K1801, K2001–K2021, K2101–K2107		AKX9002
K2151–K2157, K2201–K2207		AKX9002
K2252–K2258, K2262, K2264		AKX9002
K2301–K2304, K3401–K3415		AKX9002
K551–K556, K601–K604		AKX9002
2101, 2601, 2701, 2801		ANH1574
	HEATSINK FOR IC	
1801, 2151	HEATSINK L FOR IC	ANH1576
2001	DEDITAL SHIELD B	ANK1628
X3202 (50.00MHz)		ASS1146
X2301 (20.0MHz)		ASS1147
X3201 (62.00MHz)		ASS1148
CN3256, CN3273	CONNECTOR	B11B–PH–SM3
CN3271, CN3402	CONNECTOR	B12B–PH–SM3
CN551	CONNECTOR	B13B–PH–SM3
CN2301, CN3405	CONNECTOR	B8B–PH–SM3
CN3403		DKC1006

X DRIVE ASSY

SEMICONDUCTORS

IC3402, IC3405	STK795–450
IC3404	TC74AC04F
IC3406	TC74AC08F
IC3403	TC74AC11F
Q3403, Q3405, Q3406	2SA1162
Q3401, Q3402, Q3407	2SC2712
Q3404	2SJ281
D3401	1SS226
D3408	1SS355
D3403	D1FL20U (S)

Mark	No.	Description	Part No.
	D3404–D3407		D1FL40
	D3402		UDZ15B
COILS AND FILTERS			
	L3404, L3409 (100µH)		ATH1064
	L3401, L3402, L3405, L3406 (47µH)		ATH1080
	L3403 (10µH)		ATH1090
	L3407, L3408, L3410, L3411		ATH1099
CAPACITORS			
	C3414, C3423 (4.7 µF/250V)		ACE1126
	C3404 (100000p)		ACG1088
	C3406, C3416, C3426, C3427 (390 µF/200V)		ACH1331
	C3403		CCSRCH101J50
	C3405		CEHAT470M2D
	C3413, C3421		CEHV101M16
	C3401, C3408, C3411, C3419		CEHV470M16
	C3424, C3425		CEHV470M16
	C3402, C3409, C3410, C3412, C3415		CKSRYB103K50
	C3418, C3420, C3422		CKSRYB103K50
RESISTORS			
	R3435		RAB4C470J
	R3436		RAB4C472J
	R3410, R3411		RD1/2LMF301J
	R3404, R3406		RS1/10S101J
	R3407		RS1/10S103J
	R3401		RS1/10S222J
	R3416, R3421, R3423, R3429		RS1/10S394J
	R3445–R3448		RS1/10S564J
	R3438		RS1/2S2R2J
	Other Resistors		RS1/16S □□□J
OTHERS			
	KN3401–KN3403	GROUND PLATE	ANK–142
	CN3405	CONNECTOR	B11B–PH–SM3
	CN3401	4P–TOP POST (VH)	B4P–VH
	CN3402	PH CONNECTOR (SMT)	B5B–PH–SM3
	CN3403, CN3404, CN3406, CN3407		CKS1963

CABLE ASSY

SEMICONDUCTORS

	IC1001, IC1002	74VHCT541AMTC
	IC1003–IC1006	74VHCT574AMTC
	IC1008	ICP–S1.0
	IC1009, IC1010	TC74AC04F
	IC1007	TND301S
	Q1007	2SA1162
	Q1004	2SJ412
	Q1001, Q1005, Q1006	2SJ508
	Q1002, Q1003	2SK2201
	D1007, D1010, D1013, D1018	1SS355
	D1004, D1005, D1014	D1FL20U (S)
	D1003, D1006, D1008, D1009, D1011	UDZ15B
	D1017	UDZS5.6B

Mark	No.	Description	Part No.
COILS AND FILTERS			
	L1003 (100µH)		ATH1074
	L1102 (22µH)		ATH1081
	L1004 (0.3µH)		ATH1103
CAPACITORS			
	C1038 (0.47 µF/100V)		ACE1153
	C1039, C1043 (33µF/100V)		ACH1339
	C1036		CCSRCH181J50
	C1020–C1033		CCSRCH560J50
	C1103		CEHV101M16
	C1012, C1037, C1040, C1105, C1106		CEHV470M16
	C1041, C1042		CKSRYB332K50
	C1001–C1006, C1011, C1015–C1017		CKSRYF104Z16
	C1104		CKSRYF104Z16
	C1045		CKSRYF223Z50
	C1044, C1046, C1047		CKSRYF473Z50
RESISTORS			
	R1001–R1012, R1020, R1045–R1055		RAB4C470J
	R1019		RS1/10S102J
	R1013, R1039		RS1/10S104J
	R1081		RS1/10S154J
	R1014, R1017		RS1/10S471J
	R1018		RS1/10S472J
	R1077, R1079		RS1/10S473J
	Other Resistors		RS1/16SÅ†Å†Å†J
OTHERS			
	CN1102, CN1104		AKM1161
	CN1105		AKM1180
	KN1002		ANK1664
	CN1106	3P PH CONNECTOR	B3B–PH–SM3

U–COM ASSY

SEMICONDUCTORS

	IC3601	24LC64 (I) SN
	IC3953, IC3954	M5223AFP
	IC3611	MC145407F
	IC3602	PD5136
	IC3951, IC3952, IC3956	PQ20VZ1U
	IC3603	PST9146N
	IC3612	TC74VHC02FT
	IC3608	TC74VHC541FT
	IC3607	UPC78L05T
	Q3606–Q3613, Q3615–Q3617	2SA1162
	Q3951, Q3952, Q3960, Q3965, Q3966	2SA1162
	Q3969, Q3972	2SA1162
	Q3601–Q3605, Q3614, Q3619	2SC2712
	Q3624–Q3627, Q3953, Q3954	2SC2712
	Q3957–Q3959, Q3961, Q3962	2SC2712
	Q3967, Q3968, Q3970, Q3971	2SC2712
	Q3618	2SJ461
	D3601, D3602, D3951–D3953, D3959	1SS355

Mark	No.	Description	Part No.
	D3616, D3625–D3632		RD15MB
	D3604		RD3.0MB
	D3954		UDZS5.1B

CAPACITORS

	C3624	CCSRCH101J50
	C3645, C3648, C3653	CCSRCH220J50
	C3623	CCSRCH470J50
	C3646, C3647	CCSRSL221J50
	C3664, C3666, C3669, C3670, C3951	CEAT100M50
	C3958, C3963	CEAT100M50
	C3631	CEAT101M16
	C3617, C3628, C3634, C3643	CEAT101M6R3
	C3613	CEAT1R0M50
	C3614	CEAT220M50
	C3610	CEAT2R2M50
	C3656	CEAT470M10
	C3622, C3668, C3953, C3955, C3956	CEAT470M16
	C3969, C3970	CEAT470M16
	C3641	CEATR47M50
	C3603	CFHSP104J16
	C3615, C3626, C3627, C3652	CKSRYB102K50
	C3601, C3604–C3606, C3609, C3616	CKSRYB103K50
	C3619, C3621, C3629, C3630, C3633	CKSRYB103K50
	C3635, C3642, C3655, C3657, C3665	CKSRYB103K50
	C3667, C3952, C3957	CKSRYB103K50
	C3954, C3964	CKSRYB104K16
	C3607, C3608, C3611, C3625	CKSRYB472K50

RESISTORS

	R3821, R3822	RAB4C101J
	R3827	RAB4C102J
	R3761	RD1/2MMF100J
	R3757	RD1/2MMF3R9J
	R3951, R3957, R3958, R3960, R3975	RN1/10SE1001D
	R3989, R4020, R4022–R4024	RN1/10SE1001D
	R3953, R3984	RN1/10SE1801D
	R3974	RN1/10SE3001D
	R3959, R4021, R4038	RN1/10SE3601D
	R3955, R3996	RN1/10SE3901D
	R3967, R3985	RN1/10SE4701D
	R3952, R3968	RN1/10SE5601D
	R3973	RN1/10SE6201D
	R3964, R3972, R3995, R3997, R4035	RN1/10SE6801D
	R3601	RS1/10S225J
	R4073, R4074	RS1/10S335J
	R3792	RS1MMFR47J
	R3759, R3760	RS2MMF150J
	Other Resistors	RS1/16S □□□J

OTHERS

	K3601–K3603, K3951–K3954, K3956	AKX9002
	X3601(9.8304MHz)	ASS1155
	X3602	ASS9005
	CN3602, CN3605, CN3914 CONNECTOR	B10B–PH–SM3
	CN3606, CN3612, CN3911 CONNECTOR	B11B–PH–SM3
	CN3608 CONNECTOR	B12B–PH–SM3
	CN3912 CONNECTOR	B13B–PH–SM3
	CN3921 4P CONNECTOR	B4PS–VH
	CN3920, CN3929 CONNECTOR	B6B–PH–SM3
	CN3930 6P CONNECTOR	B6PS–VH
	CN3601, CN3603 CONNECTOR	B7B–PH–SM3
	CN3610, CN3916 CONNECTOR	B8B–PH–SM3
	CN3913 8P–VH SIDE–CONNECTOR	B8PS–VH
	CN3609 CONNECTOR	B9B–PH–SM3

SIDE SW ASSY

SWITCHES AND RELAYS

	S3941–S3951	ASG7013

RESISTORS

	All Resistors	RS1/16S □□□J

SENSOR (A) ASSY

SEMICONDUCTORS

	IC4101	LM50CIM3

CAPACITORS

	C4101	CKSRYB103K50
	C4102	CKSRYF104Z16

RESISTORS

	Other Resistors	RS1/16S □□□J

OTHERS

	CN4101 CONNECTOR	B6B–PH–SM3

FAN CABLE (A) ASSY

CAPACITORS

	C4251	CEV470M16

CONTROL ASSY

SEMICONDUCTORS

	Q5742	2SA1162
	Q5741, Q5744	2SC2712
	D5743–D5745	1SS355

COILS AND FILTERS

	L5741	LCTA221J3225

Mark	No.	Description	Part No.
CAPACITORS			
	C5741		CKSRYB472K50
RESISTORS			
	All Resistors		RS1/16S □□□J
OTHERS			
	CN5741, CN5742	JACK	AKN1070
	CN5743	9PD–SUB SOCKET	AKP1201
	CN5747	CONNECTOR	B8B–PH–SM3
	5741, 5742	SCREW TERMINAL	VNE1949

MAIN POWER ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC113, IC202, IC302, IC352		AN1431M
	IC402–IC404		AN1431M
	IC405		M5223AFP
	IC131		MC33262P
	IC111		MIP0253SP
⚠	IC112, IC181, IC201, IC301, IC351		ON3171–R (LF2)
⚠	IC401		ON3171–R (LF2)
	Q132, Q205, Q207, Q404		2SA1037K
	Q406, Q407, Q420, Q421, Q424		2SA1037K
	Q428, Q430, Q432, Q434, Q437		2SA1037K
	Q111, Q133, Q134, Q183		2SC2412K
	Q187, Q188, Q203, Q206		2SC2412K
	Q212, Q213, Q304, Q402, Q405		2SC2412K
	Q408, Q415–Q419, Q422		2SC2412K
	Q425–Q427, Q429, Q431, Q433		2SC2412K
	Q435, Q439–Q441, Q454		2SC2412K
	Q185, Q186, Q204, Q303, Q352		2SD1835
	Q401		2SD1835
	Q354		2SK2312
	Q201, Q301, Q351		2SK2847
	Q131, Q136		2SK2917
	Q202, Q302		FK7KM–12
	D151, D184, D187–D192, D196		1SS355
	D206, D209, D210, D218		1SS355
	D237, D238, D306, D357		1SS355
	D401, D402, D405, D406, D408		1SS355
	D410–D414, D421, D427, D430		1SS355
	D432–D434, D438, D440, D442		1SS355
	D444–D447, D449, D452, D456		1SS355
	D457, D459–D463		1SS355
	D250–D252		1SS376
	D112		1Z180
	D305, D355, D407, D437, D439		AEL1065
	D441, D443		AEL1065
	D205		AEL1152
	D116, D117, D133, D202, D302		D1FL20U (S)
	D373		D1FL20U (S)
	D115		D1FS4
	D132		D25XB60
	D203, D303, D353, D354		ERB37–10
	D131, D213		FCF16A60
	D111		S1WB (A) 60B
	D113		S2L60
	D212		SF10JZ47
	D118, D216		UDZ12B
	D217, D307		UDZ27B
	D454		UDZ3.6B
	D148, D149, D219		UDZ30B
	D215		UDZ36B
	D185, D208, D429		UDZS10B
	D138, D146, D150, D183, D186		UDZS5.6B
	D193–D195, D207, D239, D422		UDZS5.6B
	D428, D431, D451, D453, D455		UDZS5.6B
	D458		UDZS5.6B
	D147		UDZS6.8B
	D352		YG802C04R
	D356		YG802C09

COILS AND FILTERS

Mark	No.	Description	Part No.
⚠	L101, L102 (4.4mH)		ATF1193
⚠	L133 (217µH)		ATH1070
	L351 (8.1mH)		ATH1071
⚠	T201, T202		ATK1137
⚠	T301		ATK1138
⚠	T351		ATK1139
⚠	T111		ATK1142
	L203, L303, L353, L354		ATX1008
	L131, L132, L202, L302, L352		ATX1021

SWITCHES AND RELAYS

Mark	No.	Description	Part No.
	S111, S301		ASH1047
⚠	RY101, RY131		ASR1048

CAPACITORS

Mark	No.	Description	Part No.
⚠	C102, C104 (0.22µF/250V)		ACE1125
	C133, C156, C157 (1.0µF/400V)		ACE1150
	C201, C301, C351 (0.015µF/800V)		ACE1152
⚠	C138–C141 (0.01µF/250V)		ACG–001
	C103 (2200p/2kV)		ACG–039
	C107 (2200p/2kV)		ACG1046
⚠	C211, C212 (4700p/250V)		ACG1064
⚠	C311, C312 (3300p/250V)		ACG1065
⚠	C361, C362 (1000p/250V)		ACG1066
	C137, C205, C206, C208 (100p/2kV)		ACG1086
	C305, C306, C308, C355, C356 (100p/2kV)		ACG1086
	C358, C360, C372 (100p/2kV)		ACG1086
	C202, C203, C226 (1000µF/200V)		ACH1324
	C131, C152, C153 (270µF/420V)		ACH1325
	C111 (47µF/400V)		ACH1328
	C352–C354, C359, C373, C374 (3300µF/25V)		ACH1329
	C302 (1000µF/100V)		ACH1340
	C185		CCSQSL102J50
	C184		CCSRCH101J50
	C422		CEANP4R7M50

Mark	No.	Description	Part No.
	C120		CEHAT100M50
	C406		CEHAT101M10
	C204, C304, C402		CEHAT101M25
	C146		CEHAT101M50
	C117, C409		CEHAT220M50
	C227, C405, C415, C424		CEHAT221M10
	C370		CEHAT332M16
	C119, C147, C182, C183, C313		CEHAT470M25
	C403, C404, C408, C412		CEHAT470M25
	C418–C421, C425		CEHAT470M25
	C115		CEHAT471M16
	C116, C214		CEHAT471M25
	C414		CEHAT4R7M50
	C143		CFTLA104J50
	C112, C118		CKSQYB104K25
⚠	C451		CKSQYB105K10
	C207, C213, C307		CQMA102J50
	C144, C149, C150, C155		CQMA103J50
	C215–C217, C410		CQMA103J50
	C357		CQMA104J50
	C416		CQMA123J50

RESISTORS

	R131, R132, R167 (0.1Ω, 5W)	ACN1138
	R133, R134, R168 (2.2Ω, 7W)	ACN1139
	R226–R228, R262–R264 (1.2Ω, 7W)	ACN1141
	R203–R205, R261, R303–R305	ACN1145
	R345 (47kΩ, 3W)	ACN1145
	R429	RD1/2LMF220J
	R273	RN1/10SE1001D
	R269	RN1/10SE1002D
	R268, R490	RN1/10SE1202D
	R210, R270	RN1/10SE2001D
	R348	RN1/10SE2002D
	R306	RN1/10SE3002D
	R356, R493	RN1/10SE3901D
	R265–R267	RN1/10SE5602D
	R444	RN1/10SE6801D
	R440	RN1/10SE8202D
	R357, R464	RS1/10S1001F
	R155	RS1/10S1102F
	R115, R116, R310	RS1/10S1201F
	R198, R213	RS1/10S1502F
	R307	RS1/10S3301F
	R166	RS1/10S3603F
	R206	RS1/10S4702F
	R207, R274, R465, R491	RS1/10S5101F
	R142	RS1/10S6201F
	R461	RS1/10S6800F
	R441	RS1/10S6801F
	R462	RS1/10S9101F
	R406, R500	RS1/2S102J
	R201, R202, R301, R302	RS1/2S124J
	R189, R197, R351, R352	RS1/2S274J
	R214	RS1/2S394J
	R137	RS1/2S473J
	R140	RS1/2S474J
	R138	RS1/2S563J
	R183, R212	RS1/2S624J
	R186, R194, R199	RS1/2S684J
	R223	RS1/2S821J
	R154	RS1/2S824J
	R315	RS1MMF331J
	R312, R363	RS1MMFR22J
	VR112, VR357 R=1K,	ACP1089
	VR402 R=2.2K	ACP1090
	VR132 R=220K	ACP1096
	VR201	VRTS6VS104
	VR301	VRTS6VS473
	Other Resistors	RS1/10S □□□J

OTHERS

CN202	3P PLUG	53290–0310
CN302	4P PLUG	53290–0410
CN201, CN203, CN301, CN351, CN352	5P PLUG	53290–0510
CN303	6P PLUG	53290–0610
CN365	7P PLUG	53290–0710
H101, H102	FUSE HOLDER	AKR1007
K111–K113, K131, K132		AKX9002
K201, K202, K301, K302		AKX9002
K351–K356, K401, K404–K409		AKX9002
1	HEAT SINK S	ANH1560
2	HEAT SINK L1	ANH1561
3	HEAT SINK L2	ANH1562
4	HEAT SINK L3	ANH1563
KN201	GROUND PLATE	ANK–142
CN354	CONNECTOR	B10B–PH–SM3
CN355	CONNECTOR	B11B–PH–SM3
CN306	CONNECTOR	B12B–PH–SM3
CN101, CN131	CONNECTOR	B2P3–VH
CN111	CONNECTOR	B7B–PH–SM3
CN205	8P–VH CONNECTOR	B8P–VH
1	SCREW	BBZ30P100FMC

RCC CONTROL (A) ASSY

SEMICONDUCTORS

IC203	M5233FP
Q451	2SC2412K
Q208	2SD1835
D220–D223, D225, D227	1SS355
D229–D231, D233, D471, D472	1SS355
D232	D1FL20U (S)
D224, D226	RB751V–40
D228	UDZ12B
D234	UDZ27B

Mark	No.	Description	Part No.
CAPACITORS			
	C221 (2.2µF/25V)		ACH1278
	C222		CEHAT100M50
	C223		CEHV4R7M35
	C220		CKSRYB103K50
	C218		CQMA103J50
	C219		CQMA222J50
RESISTORS			
	R232		RD1/2MMF2R2J
	R241		RN1/10SE2702D
	R239		RS1/10S6801F
	R238		RS1/10S5101F
	R242		RS1/10S8201F
	R234		RS1/2S151J
	R235		RS1/2S471J
	R236		RS1/2S472J
	R254		RS1LMF3R3J
	Other Resistors		RS1/10S □□□J
OTHERS			
	CN207	3P SOCKET	52418–0310
	CN206	5P SOCKET	52418–0510

RCC CONTROL (B) ASSY

SEMICONDUCTORS

	IC303		M5233FP
	Q452		2SC2412K
	Q305		2SD1835
	D308–D311, D313, D315		1SS355
	D317–D319, D321, D473, D474		1SS355
	D320		D1FL20U (S)
	D312, D314		RB751V–40
	D316		UDZ12B
	D322		UDZ27B

CAPACITORS

	C317 (2.2µF/25V)		ACH1278
	C318		CEHAT4R7M50
	C319		CEHV4R7M35
	C316		CKSRYB103K50
	C314		CQMA103J50
	C325		CQMA222J50

RESISTORS

	R316		RD1/2MMF8R2J
	R325		RN1/10SE2702D
	R322		RS1/10S1102F
	R323		RS1/10S6801F
	R326		RS1/10S8201F
	R318		RS1/2S151J
	R319		RS1/2S471J
	R320		RS1/2S472J
	R338		RS1MMF1R0J
	Other Resistors		RS1/10S □□□J

Mark	No.	Description	Part No.
OTHERS			
	CN308	4P SOCKET	52418–0410
	CN307	5P SOCKET	52418–0510

RCC CONTROL (C) ASSY

SEMICONDUCTORS

	IC353		M5233FP
	Q453		2SC2412K
	Q353		2SD1835
	D358–D361, D363, D365		1SS355
	D367–D369, D371, D475, D476		1SS355
	D370		D1FL20U (S)
	D362, D364		RB751V–40
	D366		UDZ12B
	D372		UDZ27B

CAPACITORS

	C367 (2.2µF/25V)		ACH1278
	C368		CEHAT4R7M50
	C369		CEHV4R7M35
	C365		CKSRYB103K50
	C363		CQMA103J50
	C364		CQMA822J50

RESISTORS

	R364		RD1/2MMF8R2J
	R373		RN1/10SE2702D
	R370		RS1/10S1502F
	R376		RS1/10S6202F
	R371		RS1/10S6801F
	R374		RS1/10S8201F
	R366		RS1/2S151J
	R367		RS1/2S471J
	R368		RS1/2S472J
	R386		RS1MMF1R0J
	Other Resistors		RS1/10S □□□J

OTHERS

	CN361, CN362	5P SOCKET	52418–0510

OTL CONTROL (A) ASSY

SEMICONDUCTORS

	IC204		TC4538BF
	Q210		2SA1037K
	Q209, Q211		2SC2412K
	D235, D240, D241		1SS355

CAPACITORS

	C225		CCSRCH221J50
	C224		CKSRYB102K50

Mark	No.	Description	Part No.
RESISTORS			
	R260		RS1/2S100J
	Other Resistors		RS1/10S □□□J
OTHERS			
	CN208	5P SOCKET	52418–0510

OTL CONTROL (B) ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC304		TC4538BF
	Q307		2SA1037K
	Q306, Q308		2SC2412K
	D323–D325		1SS355
CAPACITORS			
	C321		CCSRCH221J50
	C320		CKSRYB102K50
RESISTORS			
	Other Resistors		RS1/10S □□□J
OTHERS			
	CN309	6P SOCKET	52418–0610

OTL CONTROL (C) ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC354		TC4538BF
	Q357		2SA1037K
	Q355, Q356		2SC2412K
	D374–D376		1SS355
CAPACITORS			
	C376		CCSRCH331J50
	C375		CKSRYB102K50
RESISTORS			
	Other Resistors		RS1/10S □□□J
OTHERS			
	CN366	7P SOCKET	52418–0710

X CABLE U ASSY

Mark	No.	Description	Part No.
OTHERS			
	CN5651, CN5652		CKS1963

X CABLE D ASSY

Mark	No.	Description	Part No.
OTHERS			
	CN5671, CN5672		CKS1963

Y DRIVE ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC705, IC762, IC854		AN1431M
	IC3602, IC3605, IC3607, IC3609, IC3611		HCPL–M611
	IC3703, IC3710		HCPL–M611
	IC701, IC750		MIP0223SC
	IC850		MIP301
	IC3613		PDT043A
	IC3702, IC3707		STK795–450
	IC3603, IC3608, IC3615		TC74ACT04F
	IC3601, IC3701		TC74ACT541FT
	IC3612		TC74HC04AF
	IC3600, IC3606, IC3614		TC74VHC541FT
	IC700, IC702, IC703, IC751–IC753		TLP181 (GR)
	IC802, IC803, IC851–IC853		TLP181 (GR)
	IC3704, IC3706, IC3708, IC3709		TND301S
	IC3712, IC3713		TND301S
	IC3700, IC3711		UPC78L05T
	Q3700, Q3701, Q750, Q752, Q800		2SA1162
	Q802		2SA1162
	Q3702, Q3704, Q700, Q751		2SC2712
	Q753, Q754, Q801, Q803, Q804		2SC2712
	Q3703		2SJ281
	Q3719		2SJ449
	Q3721		2SK2355
	Q3705, Q3706, Q3708–Q3714, Q3716		FS20VS–5
	D3715, D3716		1SS226
	D3601–D3628, D3701, D3722		1SS352
	D709, D710, D758, D761, D811		1SS355
	D814, D853, D857		1SS355
	D701, D750		1Z330
	D3700, D3709, D3713, D3717		D1FL20U (S)
	D703, D704, D752, D754, D851		D1FL20U (S)
	D890		D1FL20U (S)
	D3702, D3703, D3708, D3710, D3712		D1FL40
	D700, D753		D1FL40
	D850		D1FS
	D802		EC8FS6
	D760, D813		RD110P
	D757, D759		RD12MB
	D858		RD15MB
	D706, D707, D755, D756		RD33MB
	D806–D810		RD33MB
	D708		RD4.7MB
	D805		RD47MB
	D852		RD6.8MB
	D702, D751		S2L60
	D3714, D3720		UDZ12B
COILS AND FILTERS			
	L3701, L3702, L3704, L3710 (100μH)		ATH1064
	L3709 (100μH)		ATH1079
	L3703, L3711 (47μH)		ATH1080
	L3600–L3602, L3700 (10μH)		ATH1090
	L3705–L3708		ATH1099

Mark	No.	Description	Part No.
	T700		ATK1132
	T750		ATK1143
TRANSFORMERS			
	T850		ATK1140
CAPACITORS			
	C3716, C3727 (4.7µF/250V)		ACE1126
	C3737, C3739 (100000p)		ACG1088
	C3741–C3744		ACH1331
	C3600, C3706, C3711, C3715, C3724 (220µF/35V)		ACH1332
	C703		CEHAT101M2A
	C755		CEHAT101M2C
	C701, C750		CEHAT220M2D
	C890		CEHAT221M25
	C3618, C3619		CEHAT330M2C
	C3738, C805		CEHAT470M2E
	C3732		CEHAT471M2A
	C851		CEHAT471M35
	C3701, C3702, C3710, C3718, C3723		CEHV101M16
	C3725, C3731, C704, C752, C754		CEHV101M16
	C858		CEHV101M16
	C712, C761, C763, C812		CEHV331M16
	C854, C855		CEHV331M16
	C3612, C3700, C3708, C3730, C3735		CEHV470M16
	C705, C707, C758, C762, C810		CEHV470M16
	C813, C856		CEHV470M16
	C702, C706, C708–C711, C713		CKSQYB104K25
	C751, C753, C756, C757		CKSQYB104K25
	C759, C760, C806, C809		CKSQYB104K25
	C852, C853, C857, C859–C862		CKSQYB104K25
	C700		CKSRYB102K50
	C3603, C3607, C3611, C3615, C3616		CKSRYB103K50
	C850		CKSRYB103K50
	C3601, C3606, C3613, C3617, C3705		CKSRYF103Z50
	C3709, C3712, C3719, C3722, C3726		CKSRYF103Z50
	C3728, C3736		CKSRYF103Z50
	C3602, C3605, C3608, C3609, C3614		CKSRYF104Z16
	C3707, C3729		CKSRYF104Z16
RESISTORS			
	R702, R707 (15kΩ, 0.125W)		ACN1142
	R3793–R3796		RAB4C100J
	R3602, R3603, R3614, R3619, R3636		RAB4C470J
	R3642, R3645, R3649, R3654, R3655		RAB4C470J
	R3610, R3652, R3656		RAB4C472J
	R3776, R3777		RD1/2LMF301J
	R3715, R3716, R3749, R3750, R855		RS1/10S0R0J
	R859		RS1/10S0R0J
	R3720, R3732, R3760, R3765, R704		RS1/10S100J
	R750, R850		RS1/10S100J
	R714, R857, R861		RS1/10S101J
	R758, R765, R771, R808, R817		RS1/10S102J
	R823		RS1/10S102J
	R705, R706, R717, R761, R770		RS1/10S103J
	R772, R854		RS1/10S103J
	R824		RS1/10S104J
	R713, R773, R853, R858		RS1/10S1201F
	R753, R764, R807, R822		RS1/10S122J
	R751, R756, R757, R762		RS1/10S1302F
	R851, R852		RS1/10S151J
	R760, R815		RS1/10S152J
	R767, R825		RS1/10S153J
	R701, R754, R755		RS1/10S221J
	R719, R721, R722, R856, R860		RS1/10S272J
	R712, R720		RS1/10S332J
	R768, R826		RS1/10S392J
	R3721, R3733, R3761, R3762		RS1/10S394J
	R700		RS1/10S471J
	R711, R716, R718, R759, R769		RS1/10S472J
	R814, R827		RS1/10S472J
	R766		RS1/10S563J
	R3717, R3718, R3724, R3725		RS1/10S564J
	R3711		RS1/2S102J
	R3700		RS1/2S2R2J
	R709		RS1LMF103J
	R3784		RS1LMF5R6J
	R763		RS2LMF153J
	R710		RS2LMF222J
	R828		RS2LMF223J
	R3774		RS3LMF1R0J
	VR851 R=1K, W=0.20		ACP1089
	VR856		VRTS6VS222
	VR700		VRTS6VS472
	Other Resistors		RS1/16S □□□J
OTHERS			
	CN3601, CN3602, CN3605		AKM1180
	K3600–K3608, K3700–K3707, K3709		AKX9002
	K700–K707, K750–K754, K800		AKX9002
	K802–K804, K850–K857		AKX9002
	KN3700	GROUND PLATE	ANK–142
	CN800	CONNECTOR	B10B–PH–SM3
	CN3700	6P–VH CONNECTOR	B6P–VH
	CN700	CONNECTOR	B7B–PH–SM3
	CN3701	CONNECTOR	B8B–PH–SM3

SCAN (A) ASSY

SEMICONDUCTORS

IC3801–IC3806		UPD16344GF–3BA

CAPACITORS

C3801, C3802, C3811, C3812		ACG1088
C3821, C3822, C3832, C3833		ACG1088
C3842, C3843, C3852, C3853 (100000p)		ACG1088
C3813, C3827, C3838, C3845, C3855		CCSRCH121J50
C3804, C3805		CCSRCH151J50

Mark	No.	Description	Part No.
	C3803, C3806–C3809, C3814–C3819		CCSRCH390J50
	C3823–C3826, C3828, C3830		CCSRCH390J50
	C3834–C3837, C3839, C3840, C3844		CCSRCH390J50
	C3846–C3850, C3854, C3856–C3861		CCSRCH390J50
	C3810, C3820, C3831, C3841, C3851		CKSRYF104Z16
	C3862		CKSRYF104Z16

RESISTORS

R3801–R3803, R3805, R3809, R3810		RAB4C221J
Other Resistors		RS1/16S □□□ J

OTHERS

CN3801, CN3803–CN3807		AKM1161
K3839–K3845, K3848		AKX9002
CN3802	50P CONNECTER	KF050HC50

SCAN (B) ASSY

SEMICONDUCTORS

IC3501–IC3506		UPD16344GF–3BA

CAPACITORS

C3501, C3502, C3511, C3512		ACG1088
C3521, C3522, C3532, C3533		ACG1088
C3542, C3543, C3552, C3553 (100000p)		ACG1088
C3505, C3513, C3527, C3538, C3545		CCSRCH121J50
C3555, C3559		CCSRCH151J50
C3503, C3504, C3506–C3509		CCSRCH390J50
C3514–C3519, C3523–C3526, C3528		CCSRCH390J50
C3530, C3534–C3537, C3539, C3540		CCSRCH390J50
C3544, C3546–C3550, C3554		CCSRCH390J50
C3556–C3558, C3560, C3561		CCSRCH390J50
C3510, C3520, C3531, C3541, C3551		CKSRYF104Z16
C3562		CKSRYF104Z16

RESISTORS

R3501–R3503, R3505, R3509, R3510		RAB4C221J
Other Resistors		RS1/16S □□□ J

OTHERS

CN3501, CN3503–CN3505		AKM1161
CN3507, CN3508		AKM1161
K3539–K3545, K3846		AKX9002
CN3502	50P CONNECTER	KF050HC50

DOWNLOAD BLOCK

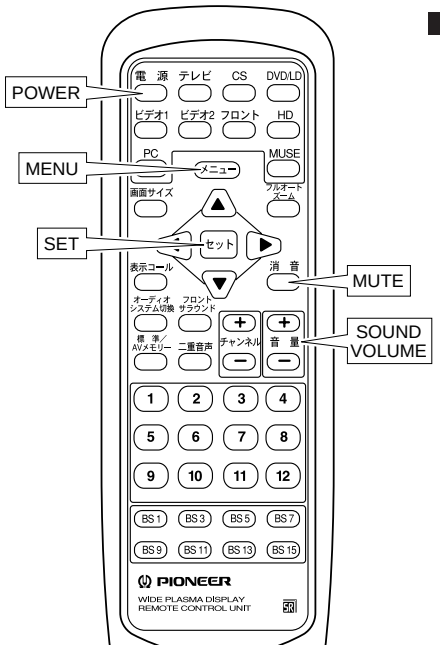
SEMICONDUCTORS

IC2255		MBM29F400BC–90PFTN

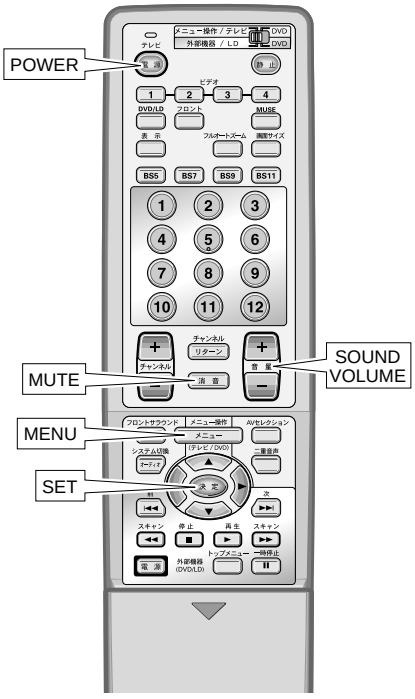
6. ADJUSTMENT

■ SERVICE FACTORY MODE

Perform the operations of Service factory mode using the remote control unit provided with thePDP-501HD (CU-PD001: AXD1432) or the remote control unit provided with the PDP-502HD (CU-PDP009: AXD1673).



CU-PDP001
(AXD1432)



CU-PDP009
(AXD1673)

■ Entering Service Factory Mode

Normal Operation Mode (Standby)

"Menu" key

"Menu" key
⇩
"Set" key
⇩
*"Power" key
within 3 seconds

*CU-PDP009 has two "Power" keys. In Service factory Mode, use the "Power" key located on the upper left of the remote control unit.

Service Factory Mode

SERVICE mode
Displaying version of the system micro computer.
Displaying type and format of detected input signal.
Displaying the frequency/the number of lines of input signal.

"MUTE" key

RANGE CHECK mode
Mode for checking operations of each device at video section, by changing its adjustment value to maximum and to minimum.
This mode is not used for repair service.

"MUTE" key

"MUTE" key

PICUTRE mode
REFERENCE 1…… "1" key
REFERENCE 2…… "2" key
Mode for adjusting video section (Independent for each signal type and format)

"MUTE" key

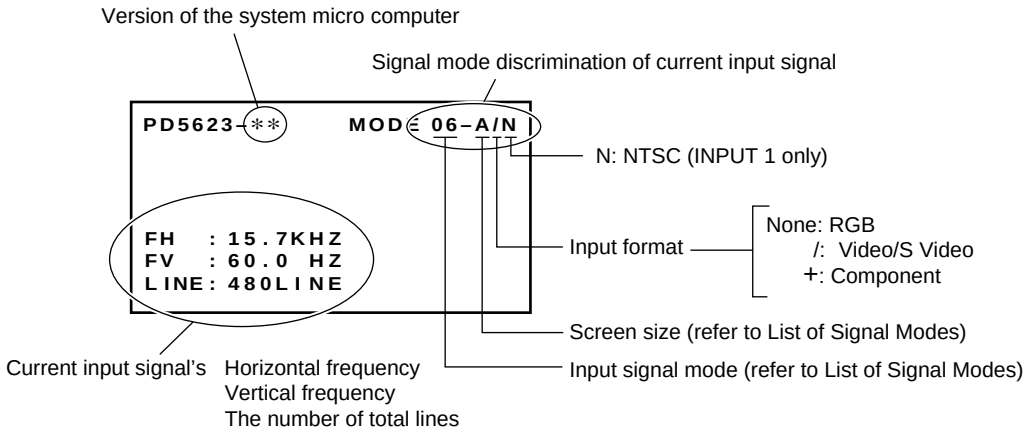
INITIALIZE mode
SUB VIDEO……
"1" key + "SET" key
DRIVE ADJ……
"9" key + "SET" key
Mode for each setting
Drive section adjustment
Pulse/ABL adjustment
Sub video section adjustment
(Common value to all input signal)

- In each adjustment mode, adjusted values can be changed with +/– of "SOUND VOLUME" key on the remote control unit.
- After adjustment, adjusted values can be fixed by pressing "SET" key.

Note)

- When an input signal mode is changed, the adjustment mode is set to Normal operation mode automatically.
- SIGNAL (PC/VIDEO) and FORMAT (RGB/COMPONENT) can not be changed in the service factory mode.
- When the service factory mode is selected, the following settings for the input signal currently selected will be automatically changed:
  - HIGH CONTRAST → "OFF"
  - PICTURE mode → "STD"
    (The settings preset by the user will be restored when the service factory mode is canceled.)
  - SCREEN adjustments → "0" or "OFF"

■ SERVICE MODE



■ List of Signal Modes

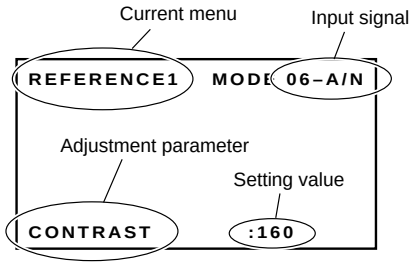
Vertical Frequency Fv (Hz)	Holizontal Frequency Fh (Hz)	Input Signal Dot * Line	Signal Mode		Panel Display Dot * Line	OSD	Remarks
			PC	VIDEO			
56.0	24.8K	640 * 400 (PC-98)	03-2	—	1280 * 768	FULL	FULL display only
	35.2K	800 * 600 (SVGA 56Hz)	04-0	—	800 * 600	ORIGINAL	**(VESA: 35.156k/56.250)**
			04-1	—	1024 * 768	4:3 NORMAL	
			04-2	—	1280 * 768	FULL	
60.0	15.734K	NTSC	—	06-6	984 * 768	4:3 NORMAL	06-6 – 06-A: RGB
		SDTV16:9 (704 * 480 i)	—	06-7	1280 * 768	FULL	06-6+ – 06-A+: Y color-difference
		SDTV 4:3 (704 * 480 i)	—	06-8	↑	ZOOM	06-6/ – 06-A/: Video/S Video
		SDTV 4:3 (640 * 480 i)	—	06-9	↑	CINEMA WIDE	
			—	06-A	↑	NATURAL WIDE	
	31.5K	640 * 480 (VGA)	07-0	—	640 * 480	ORIGINAL	PC setting
		Double-speed NTSC	07-1	—	1024 * 768	4:3NORMAL	**(VESA: 31.469k/59.940)**
		SDTV16:9 (704 * 480 p)	07-2	—	1280 * 768	FULL	
		SDTV 4:3 (704 * 480 p)	—	07-6	984 * 768	4:3NORMAL	VIDEO setting
		SDTV 4:3 (640 * 480 p)	—	07-7	1280 * 768	FULL	07-6 – 07-A: RGB
			—	07-8	↑	ZOOM	07-6+ – 07-A+: Y color-difference
			—	07-9	↑	CINEMA WIDE	
			—	07-A	↑	NATURAL WIDE	
	33.8K	HDTV16:9 (1920 * 1080 i)	—	08-7	1280 * 768	FULL (HD)	08-7+: Y color-difference
							08-7: RGB
	37.9K	800 * 600 (SVGA)	0A-0	—	800 * 600	ORIGINAL	**(VESA: 37.879k/60.317)**
			0A-1	—	1024 * 768	4:3NORMAL	
			0A-2	—	1280 * 768	FULL	
	45.0K	HDTV16:9 (1280 * 720 p)	—	0B-7	1280 * 768	FULL (HD)	0B-7+: Y color-difference
							0B-7: RGB
	48.4K	1024 * 768 (XGA)	0C-1	—	1024 * 768	ORIGINAL	**(VESA: 48.363k/60.004)**
			0C-2	—	1280 * 768	FULL	
66.7	35.0K	640 * 480 (Macintosh 13)	14-0	—	640 * 480	ORIGINAL	
			14-1	—	1024 * 768	4:3 NORMAL	
			14-2	—	1280 * 768	FULL	
70.1	31.5K	640 * 400 (PC-H98)	15-2	—	1280 * 768	FULL	720 * 400 can be displayed
							(Data amount drops)
	56.5K	1024 * 768 (XGA)	16-1	—	1024 * 768	ORIGINAL	**(VESA: 56.476k/70.069)**
			16-2	—	1280 * 768	FULL	

Vertical Frequency Fv (Hz)	Holizontal Frequency Fh (Hz)	Input Signal Dot ∗ Line	Signal Mode		Panel Display Dot ∗ Line	OSD	Remarks
			PC	VIDEO			
72.0	37.9K	640 ∗ 480 (VGA)	18-0	—	640 ∗ 480	ORIGINAL	**(VESA: 37.861k/72.809)**
			18-1	—	1024 ∗ 768	4:3 NORMAL	
			18-2	—	1280 ∗ 768	FULL	
	48.1K	800 ∗ 600 (SVGA)	19-0	—	800 ∗ 600	ORIGINAL	**(VESA: 48.077k/72.188)**
			19-1	—	1024 ∗ 768	4:3 NORMAL	
			19-2	—	1280 ∗ 768	FULL	
75.0	37.5K	640 ∗ 480 (VGA)	1C-0	—	640 ∗ 480	ORIGINAL	**(VESA:37.500k/75.000)**
			1C-1	—	1024 ∗ 768	4:3 NORMAL	
			1C-2	—	1280 ∗ 768	FULL	
	46.9K	800 ∗ 600 (SVGA)	1D-0	—	800 ∗ 600	ORIGINAL	**(VESA:46.875k/75.000)**
			1D-1	—	1024 ∗ 768	4:3 NORMAL	
			1D-2	—	1280 ∗ 768	FULL	
(74.6)	49.7K	832 ∗ 624 (Macintosh 16)	1E-0	—	832 ∗ 624	ORIGINAL	4:3/FULL → Top & bottom are masked
			1E-1	—	1024 ∗ 748	4:3 NORMAL	
			1E-2	—	1280 ∗ 748	FULL	
75.0	60.0K	1024 ∗ 768 (XGA)	1F-1	—	1024 ∗ 768	ORIGINAL	**(VESA: 60.023k/75.029)**
(74.9)	60.2K	1024*768 (Macintosh 19)	1F-2	—	1280 ∗ 768	FULL	74.9/60.2K.....MAC
87.0	35.5K	1024 ∗ 768 (XGA)	27-1	—	1024 ∗ 768	ORIGINAL (TYPE)	**(VESA: 35.522k/43.479 INTERLACED)**
INTERLACE			27-2	—	1280 ∗ 768	FULL (TYPE)	

■ Items to adjust and set value in Each Adjustment mode

■ PICUTRE mode

● Do not operate keys that have no parameters applied to the current input signal mode.



Remote Control Key	Adjustment Parameter	Adjusting & Setting Item	Setting Value
1	REFERENCE 1	Go to REFERENCE 1 adjustment menu with "SET" key	——
2	REFERENCE 2	Go to REFERENCE 2 adjustment menu with "SET" key (Video signal input)	——
3	GAME	Go to GAME adjustment menu with "SET" key (Video signal input)	——
4	MOVIE	Go to MOVIE adjustment menu with "SET" key (Video signal input)	——
8	Y/C STD	Go to Y/C STD adjustment menu with "SET" key (S signal input)	——

Note) For Parameter , adjustment values are fixed.

● REFERENCE 1 mode

Adjustment mode independent of input signal format / Data stored in EEPROM of UCOM ASSY

Remote Control Key	Adjustment Parameter	Adjusting & Setting Item	Setting Value							
			C. VIDEO/YC	COMPONENT			RGB VIDEO			PC
			NTSC	STD	×2	HDTV	STD	×2	HDTV	
1	CONTRAST	Contrast adjustment	Adjustment required							
2	BLACK LVL.	Brightness adjustment								
3	COLOR	Color adjustment	Adjustment required							
4	TINT	Tint adjustment (C.Video signal input only)								
5	H. SHARP	Horizontal sharpness setting (Video signal input)	128	113	128	128	113	128	128	—
	H. ENHANCE	Horizontal sharpness setting (PC signal input)	—	—	—	—	—	—	—	128
6	DETAIL	Detail setting	123	123	128	128	123	128	128	128
7	R HIGH	White Balance adjustment	Adjustment required							
8	G HIGH									
9	B HIGH									
10	R LOW									
11	G LOW									
12	B LOW									
BS5	V. SHARP	Vertical sharpness setting (Video signal input)	128	113	128	128	113	128	128	—
	V. ENHANCE	Vertical sharpness setting (PC signal input)	—	—	—	—	—	—	—	128
BS9	ABL LEV OFFSET	ABL Level offset adjustment	Adjustment required (note 2)							
BS11	PLS NUM OFFSET	Pulse number offset adjustment								

● REFERENCE 2 mode

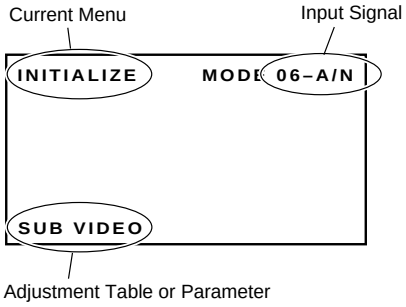
Adjustment mode independent of input signal format / Data stored in EEPROM of ANALOG VIDEO ASSY

Remote Control Key	Adjustment Parameter	Adjusting & Setting Item	Setting Value							
			C. VIDEO/YC	COMPONENT			RGB VIDEO			PC
			NTSC	STD	×2	HDTV	STD	×2	HDTV	
1	R-Y/R	Matrix demodulation angle setting (Video signal input only)	6	6	6	6	6	6	6	—
2	R-Y/B		12	12	12	12	12	12	12	—
3	G-Y/R		10	10	10	10	10	10	10	—
4	G-Y/B		5	5	5	5	5	5	5	—
9	ENHANCER MAIN	Sharpness setting (Video signal input)	0	0	0	0	0	0	0	—
10	ENHANCER V		0	0	0	0	0	0	0	—
11	ENHANCER M		0	0	0	0	0	0	0	—
12	ENHANCER H		0	0	0	0	0	0	0	—
BS5	R-Y LEVEL	Color-difference adjustment (INPUT 1 only)	Adjustment required	—	—	—	—	—	—	—
BS7	B-Y LEVEL			—	—	—	—	—	—	—
BS9	Y DELAY	Y delay setting (INPUT 1 only)	1	—	—	—	—	—	—	—
BS11	CTI LEVEL	Color transient setting (INPUT 1 only)	1	—	—	—	—	—	—	—

Note 1) For Parameter , adjustment values are fixed.

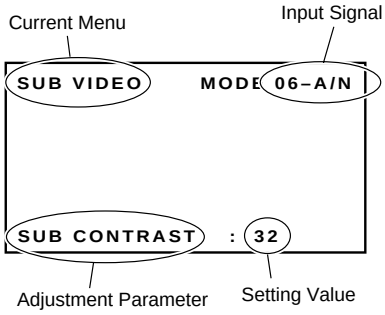
Note 2) If unnecessarily adjusted, power consumption of the unit is changed and the panel is damaged.
Adjust only in case of necessity.

■ INITIALIZE mode (Common for all input signal types and formats)



Remote Control Key	Adjustment Parameter	Adjusting & Setting Item	Setting Value
1	SUB VIDEO	Go to SUB VIDEO adjustment menu with "SET" key	——
2	MIRROR MODE	Setting Mirror mode OFF → X → Y → XY → OFF	OFF
3	FULL MASK	Setting Full mask display OFF ↔ ON	OFF
5	HOUR METER	Displaying operation hour meter	——
6	BAUD RATE	Setting Baud rate 1200 → 2400 → ····· → 19200 → 1200	4800
7	EEPROM INIT.	Initializing EEPROM (Do not use)	——
8	MASK CONTROL	Setting Original /4:3 displaying area motion mode. OFF ↔ ON	ON
9	DRIVE ADJ	Go to DRIVE adjustment menu with "SET" key	——
BS5	FINAL SET UP	Setting to default factory setting with "SET" key (refer to Details of FINAL SETUP)	——
BS7	DISP POSI.	Go to DISP POSI. adjustment menu with "SET" key	——
BS11	BRIGHT ENHANCE	Setting Bright enhance (to enhance the luminance for the screen center)	VIDEO: ON PC: OFF

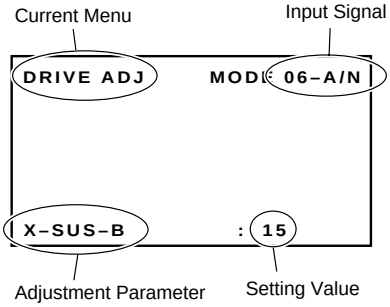
● SUB VIDEO mode (Common for all input signal types and formats)



Remote Control Key	Adjustment Parameter	Adjusting & Setting Item	Setting Value
1	SUB CONTRAST	Sub Contrast adjustment (except for PC)	Adjustment required
2	SUB BRIGHT	Sub Brightness adjustment (except for PC)	Adjustment required
3	SUB TINT	Sub Tint setting (except for PC)	64
8	PULSE NUMBER	Base pulse number adjustment (note)	8
9	ABL LEVEL	ABL Level value adjustment (note)	128
BS5	ACL SW	ACL setting OFF ↔ ON	ON
BS11	D RANGE SW	Dynamic Range setting OFF ↔ ON	OFF

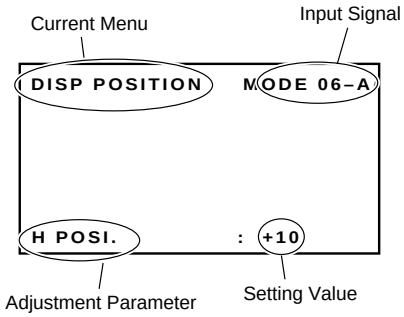
Note) If unnecessarily adjusted, power consumption of the unit is changed and the panel is damaged. Adjust only in case of necessity.

● DRIVE ADJ mode (Common for all input signal types and formats)



Remote Control Key	Adjustment Parameter	Adjusting & Setting Item	Setting Value
1	X-SUS-B	Sustain Drive Pulse adjustment	Adjustment required
2	X-SUS-G		8
3	Y-SUS-B		Adjustment required
4	Y-SUS-G		8
10	R SIDE LEVEL	Side Mask color/level setting	100
11	G SIDE LEVEL		97
12	B SIDE LEVEL		100
BS5	R FULL LEVEL	Full Mask color/level setting	255
BS7	G FULL LEVEL		255
BS9	B FULL LEVEL		255

● **DISP POSI. mode** (Common for all input signal types and formats)



Remote Control Key	Adjustment Parameter	Adjusting & Setting Item	Setting Value
1	H POSI.	Horizontal display position offset	0
2	V POSI.	Vertical display position offset	0
3	H SIZE	Horizontal screen size offset	0
8	V SIZE	Vertical screen size offset	0
9	RGB MATRIX	Switching between 1(Y/Pb/Pr) and 2 (Y/Cb/Cr)	1

Notes:
● The RGB MATRIX setting is adjustable with the component signals except for 480i and 480p.
● The above adjustments are also available on the user menu.

■ Details of FINAL SETUP (Factory default setting)

Item		Default Setting	Remarks
Power(STAND-BY/ON)		STANDBY	
Input function		INPUT1	
Displaying size		VIDEO: NATURAL WIDE	For each input function
		PC ①: ORIGINAL (including TYPE)	For INPUT 3, 4 ∩ PC signal mode The priority order is ① → ② → ③
		PC ②: 4: 3NORMAL (including TYPE)	
		PC ③: FULL (including TYPE)	
V. POSITION		VIDEO: 0	For each input function
AUTO SCREEN		VIDEO: OFF	Common for all input functions
HIGH CONTRAST		VIDEO: OFF	For each input function
PICTURE MODE *		STD (refer to next page)	For each input function ∩ signal (VIDEO/PC) mode
SCREEN	(VIDEO)	0	For each INPUT 2, 3, 4
	(PC)	0	For INPUT 3, 4 ∩ PC signal mode
POWER SAVE	(VIDEO)	OFF	Common for all input functions
	(PC)	OFF	Common for INPUT 3, 4
SIGNAL/FORMAT		VIDEO/COMPONENT 2	INPUT2
		PC/RGB	INPUT3
		PC/RGB	INPUT4
G ON SYNC		OFF	INPUT3
		OFF	INPUT4
STILL		OFF	Common for all input functions
INPUT LABEL		□□ INPUT1	INPUT1
		□□ INPUT2	INPUT2
		□□ INPUT3	INPUT3
		□□ INPUT4	INPUT4
MIRROR MODE		OFF	Common for all input functions
BRIGHT ENHANCE	(VIDEO)	ON	Common for all input functions
	(PC)	OFF	Common for INPUT 3, 4
BAUD RATE		4800BPS	Common for all input functions
FAN CONTROL		AUTO	Common for all input functions
HOUR METER		0	Operation hour

■ Details of FINAL SETUP (Factory default setting)

Item		Default Setting	Remarks
SIDE MASK	R LEVEL	100	Common for all input functions
	G LEVEL	97	
	B LEVEL	100	
FULL MASK		OFF	Common for all input functions
MASK CONTROL		ON	Common for all input functions

■ Details of PICTURE Mode

Item	Default Setting	Remarks
CONTRAST	0	For each input function ∩ signal (VIDEO/PC) mode
BLACK LVL.	0	For each input function ∩ signal (VIDEO/PC) mode
COLOR	0	For each input function (VIDEO signal only)
TINT	0	For each input function (VIDEO signal only)
SHARP	0	For each input function (VIDEO signal only)
R LEVEL	0	For each INPUT 3, 4 (PC signal only)
G LEVEL	0	For each INPUT 3, 4 (PC signal only)
B LEVEL	0	For each INPUT 3, 4 (PC signal only)
3D Y/C LEVEL	3	INPUT 1 COMPOSITE signal only
3D NR LEVEL	1	INPUT 1 S signal only
COLOR TEMP	STD	For each input function (VIDEO signal only)
FILM MODE	OFF	For each input function (VIDEO signal only)
HIGH CONTRAST	OFF	For each input function (VIDEO signal only)
ABL	ON	For each INPUT 3, 4 (PC signal only)

■ Adjustments required when the set is repaired or replaced

■ VIDEO ASSY

● When repaired

1) (Procedure 1) Color difference (R-Y/B-Y) adjustment
2) (Procedure 2) Sub-Contrast/Sub-Bright adjustment
3) (Procedure 8) White balance adjustment

● When replaced

3) (Procedure 8) White balance adjustment

■ MAIN POWER ASSY

● When repaired

1) (Procedure 3) VSUS/VADR/STB5V/+14V voltage adjustment
2) (Procedure 4) VSUS UVP/+B voltage adjustment

● When replaced

1) (Procedure 3) VSUS voltage adjustment
(Adjust the voltage to the voltage value mentioned on the "Drive voltage label")

Caution: Setting of SW, S111 at MAIN POWER ASSY
PDP-502MXE Only: Set the SW, S111 to AC220V side.
Otherwise the power will shutdown.
PDP-502MX/505HD: Set the SW, S111 to AC100V side.

■ DIGITAL VIDEO ASSY

● When replaced

1) (Procedure 5) 5V/3.3V voltage adjustment

● When replaced

No adjustment required.

■ Y DRIVE ASSY

● When repaired

1) (Procedure 6) VOFS/VH/IC5V voltage adjustment

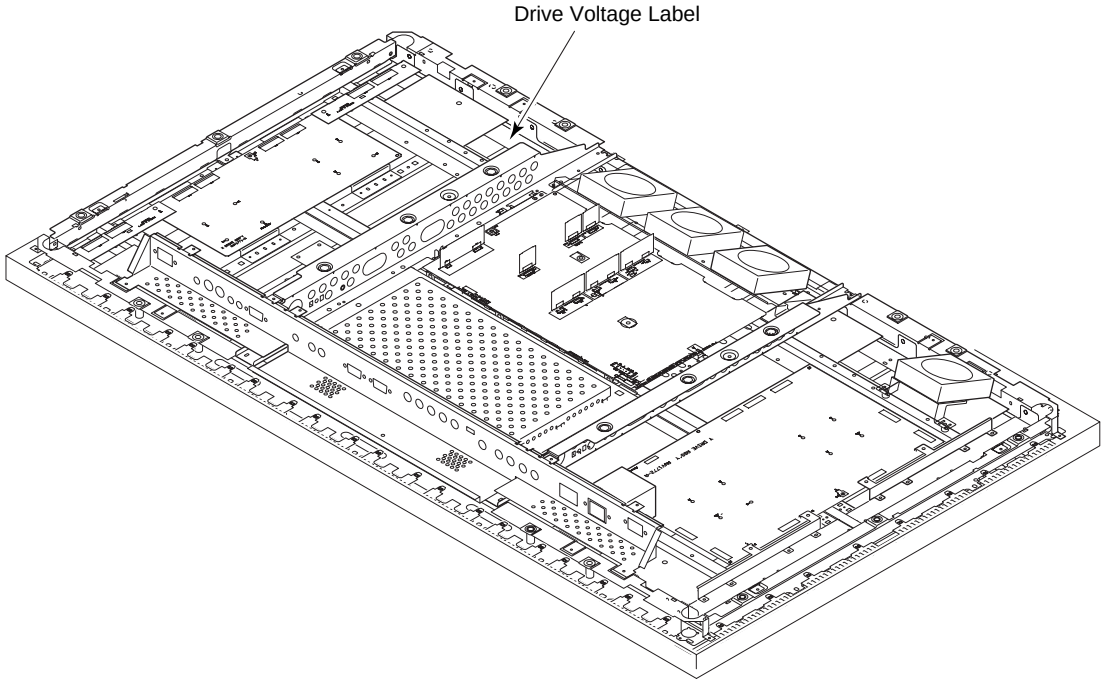
● When replaced

1) (Procedure 6) VOFS voltage adjustment
(Adjust the voltage to the voltage value mentioned on the "Drive voltage label")

■ UCOM ASSY

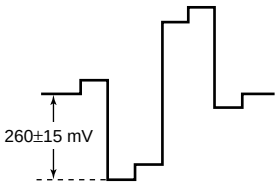
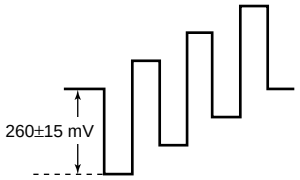
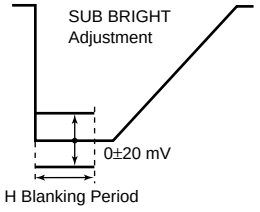
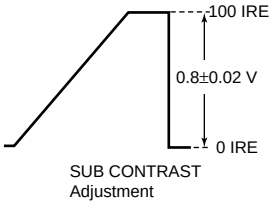
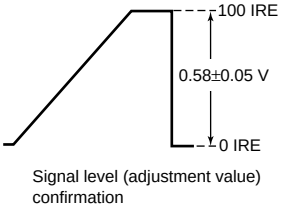
● When replaced

Remove IC3601, EEPROM (24LC64(1)SN-TBB) from the defect ASSY and replace it with the one on the new ASSY.

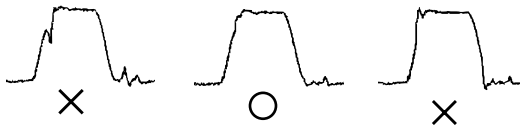
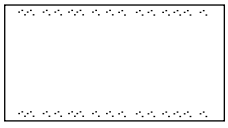


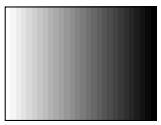
Position of Drive Voltage Label

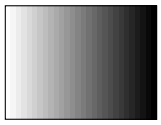
■ Adjusting Method

Procedure	Adjusting Item	Input signal	Adjusting Point	Adjusting Method
1	Color-difference Level adjustment (R–Y LEVEL/ B–Y LEVEL)	Full Field Color bar signal	REFERENCE 2 in Factory mode R–Y LEVEL ..... "BS5" Key	**R-Y LEVEL adjustment** Observe R-Y color-difference waveform at Pin 3 (INT_Cr) of IC1401 (MATRIX IC) in VIDEO Assy. Adjust R-Y LEVEL so that the point indicated in the right figure becomes "260mV±15mV". 
			REFERENCE 2 in Factory mode B–Y LEVEL ..... "BS7" Key	**B-Y LEVEL adjustment** Observe B-Y color-difference waveform at Pin 4 (INT_Cb) of IC1401(MATRIX IC) in VIDEO Assy. Adjust B-Y LEVEL so that the point indicated in the right figure becomes "260mV±15mV". 
2	SUB CONTRAST/ SUB BRIGHTNESS adjustment	RAMP signal	SUB VIDEO mode in Factory mode SUB CONTRAST..... "1" Key SUB BRIGHT ..... "2" Key ACL. SW .... "BS5" Key	**SUB BRIGHT / SUB CONTRAST adjustment** 1) SUB BRIGHT rough adjustment Set P. ACL. SW OFF. Observe signal at K2417 in Video Assy. Adjust so that the blanking period level of the signal becomes 0 IRE level.  2) SUB CONTRAST adjustment Set P. ACL. SW OFF. Adjust so that 0 to 100 IRE level of the signal at K2417 in Video Assy becomes "0.8V". 3) SUB BRIGHT fine adjustment Set P. ACL. SW ON. Adjust so that the signal level in blanking period at K2417 in Video Assy becomes 0 IRE level.  4) Signal level (adjustment value) confirmation Set P. ACL. SW ON. Observe the signal at K2417 in Video Assy. Confirm that the 0 IRE to 100 IRE level of the signal is "0.58V". 

Procedure	Adjusting Item	Input signal	Adjusting Point	Adjusting Method
3	VSUS/VADR/ STB5V/+14V Voltage adjustment	White 100% signal	VR201 (VSUS) MAIN POWER ASSY	**VSUS (Sustain voltage) adjustment** Adjust so that the voltage between TP201(VSUS) and TP202 (SUS GND) becomes ±1V of the voltage indicated at the "voltage indication label". **The symptom in case of mis-adjustment** If the VSUS adjustment is not performed properly, dots like blinking luminance points appear. If deviated greatly from the right adjustment point, Panel will stop lighting.
			VR301 (VADR) MAIN POWER ASSY	**VADR (Address voltage) adjustment** Adjust so that the voltage between TP301(VADR) and TP302 (ADR GND) becomes "59V±0.5V". **The symptom in case of mis-adjustment** If the VADR adjustment is not performed properly, dots like blinking luminance points appear. If deviated greatly from the right adjustment point, Panel will light white.
			VR111 (STB5V) MAIN POWER ASSY	**STB5V adjustment** Adjust so that the voltage between TP111(STB5V) and TP113(STB GND) becomes "+5V ± 0.1V".
			VR356 (+14V) MAIN POWER ASSY	**+14V adjustment** Adjust so that the voltage between TP355(+14V) and TP356 (AGND) becomes "+14V ± 0.1V".
		Note) Be sure to measure between specified test points.		
4	VSUS UVP/+B Voltage adjustment	White 100% signal	VR401 (VSUS UVP) MAIN POWER ASSY	**VSUS UVP adjustment** Adjust so that the voltage between TP404 (V1) and TP405 (V2) becomes "0V ± 10mV".
			VR131 (+B) MAIN POWER ASSY	**+B Voltage adjustment** Adjust so that the voltage between TP131 (+B) and TP132 (P. GND) becomes "+380V ± 1.0V".
		Note) Normally, these adjustments are not needed in repair service. Adjust them only when VR is rotated by mistake and it needs to be re-adjusted. Moreover, be sure to measure between specified test points in adjustment.		
5	5V/3.3V Voltage adjustment	Any input signal	VR552 (5V) DIGITAL VIDEO ASSY	**+5V adjustment** Adjust so that the voltage between TP553 (5V) and TP554 (DGND) becomes "+5V ± 0.05V".
			VR602 (3.3V) DIGITAL VIDEOASSY	**+3.3V adjustment** Adjust so that the voltage between TP601 (3.3V) and TP602 (DGND) becomes "3.3V ± 0.05V".
		Note) Be sure to use a non-metallic screw driver such as a ceramic screw driver in the adjustment. If a metallic screw driver is used, DC/DC converter may operate wrongly. Moreover, be sure to measure between specified test points.		

Procedure	Adjusting Item	Input signal	Adjusting Point	Adjusting Method
6	VOFS/VH/ VRN/IC5V Voltage adjustment	White 100% signal	VR700 (VOFS) Y DRIVE ASSY	**VOFS (Offset voltage) adjustment** Adjust so that the voltage between TP705 (VOFS) and TP703 (SUS GND) becomes ± 0.5V" of the voltage indicated at the "voltage indication label". **The symptom in case of mis-adjustment** If the VOFS adjustment is not performed properly, dots like blinking luminance points appear. If deviated greatly from the right adjustment point, Panel will light white.
			VR750 (VH) Y DRIVE ASSY	**VH (voltage for Scan IC) adjustment** Adjust so that the voltage between TP751 (VH) and TP753 (PSUS) becomes "103V ± 0.5V". PSUS (=GNDH) is a floating GND and the electric potential is different from that of chassis GND. Be sure not to short-circuit PSUS (=GNDH) and another GND, because that may damage the unit. **The symptom in case of mis-adjustment** If the VH adjustment is not performed properly, dots like blinking luminance points appear. If deviated greatly from the right adjustment point, panel will light white.
			VR851 (IC5V) Y DRIVE ASSY	**IC5V adjustment** Adjust so that the voltage between TP851 (IC5V) and TP854 (PSUS) becomes "+5.0V ± 0.1V". PSUS (=GNDH) is a floating GND and the electric potential is different from that of chassis GND. Be sure not to short-circuit PSUS (=GNDH) and another GND, because that may damage the unit.
		Note) Be sure to measure between specified test points.		
7	Sustain Pulse Waveform adjustment	White 100% signal	DRIVE ADJ mode in Factory mode X-SUS-G……."2" Key Y-SUS-G ……"4" Key	**X-SUS-G, Y-SUS-G adjustment** Set to the indicated value with a key on the remote control unit. (refer to DRIVE ADJ mode)
			DRIVE ADJ mode in Factory mode X-SUS-B……."1" Key Y-SUS-B ……"3" Key	**X-SUS-B, Y-SUS-B adjustment** 1) Set adjustment value to "8", and confirm that green mis-discharging dots do not appear within 20mm from top & bottom of Screen. 2) When green mis-discharging dots appear, decrease the adjustment value "1" by "1" until green mis-discharging dots will disappear. Set the adjustment value when the green disappear. 3) Observe sustain waveform at each Drive Assy, between K3402 (X-PSUS) and K3404 (SUS-GND), and TP3716 (Y-PSUS) and TP3713 (SUS-GND). Confirm that the waveform is not distorted.  **The symptom in case of mis-adjustment**  Green mis-discharging dots appear within 20mm from top & bottom of Screen.

<table>
<tr><th>Procedure</th><th>Adjusting Item</th><th>Input signal</th><th>Adjusting Point</th><th>Adjusting Method</th></tr>
<tr><td rowspan="3">8</td><td rowspan="3">White Balance adjustment</td><td>Preparation setting</td><td>REFERENCE 1
in Factory mode
CONTRAST...."1" Key
BLACK LVL. ...."2" Key</td><td>Set CONTRAST to "128" and BLACK LVL. to "128".</td></tr>
<tr><td>1) RAMP signal
 
2) White Signal
(14 IRE: Gray)

3) RAMP signal
 
4) White Signal
(56 IRE: Gray)</td><td>REFERENCE 1
in Factory mode
R LOW..... "10" Key
G LOW..... "11" Key
B LOW..... "12" Key

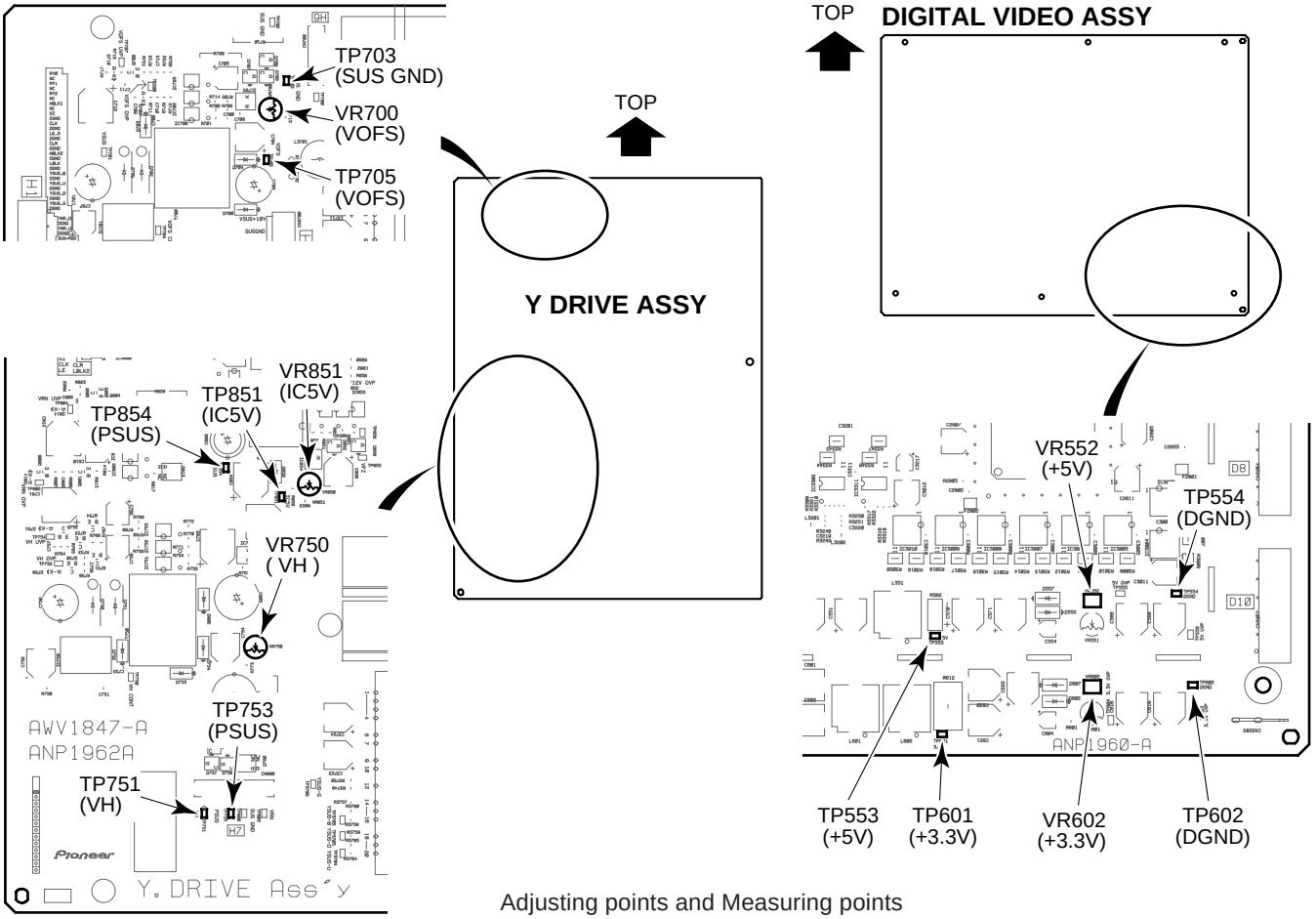
REFERENCE 1
in Factory mode
R HIGH..... "7" Key
G HIGH....."8" Key
B HIGH..... "9" Key

SUB VIDEO mode
in Factory mode
ACL. SW
....."BS5" Key</td><td>LOW LIGHT adjustment
1) Observe the signals at TP terminals R: K2423, G: K2424, B: K2425, of VIDEO ASSY. Adjust with the keys on the remote control unit, so that the black level (0 IRE) of the signal is within the DC voltage range of "1.85V ± 0.05V".
2) Adjust with the keys on the remote control unit, so that the image on the screen becomes a little greenish white (T=8500k, dev.=0.005uv).

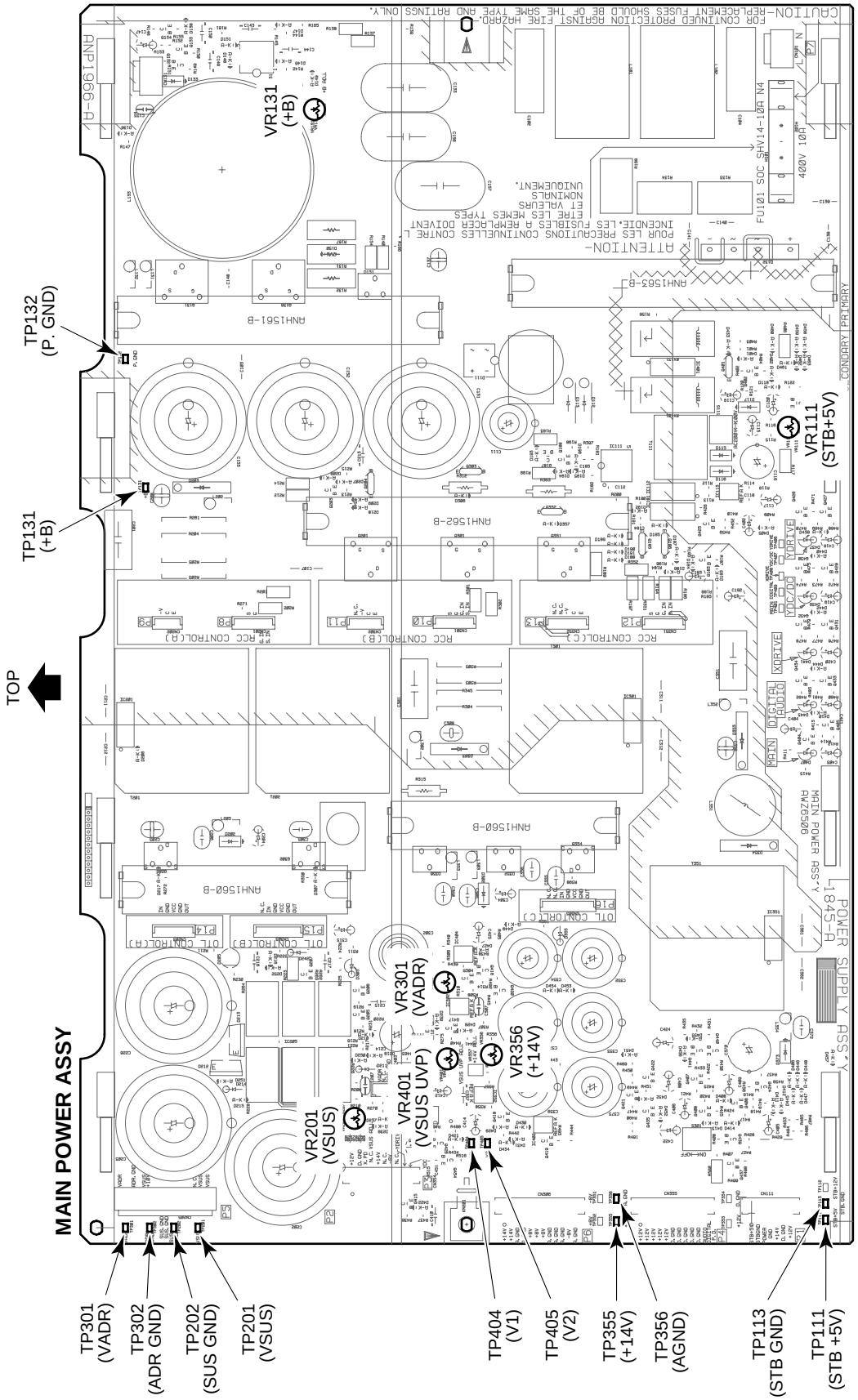
HIGH LIGHT adjustment
3) Set P. ACL. SW OFF.
Observe TP terminals R: K2423, G: K2424, B: K2425 of VIDEO ASSY. Adjust with the keys on the remote control unit, so that the white level (100 IRE) is within the DC voltage range of "2.8V ± 0.05V".
4) Adjust with the keys on the remote control unit. so that the image on the screen becomes a little greenish white (T=8500k, dev.=0.005uv).

Convergence adjustment
5) Repeat procedure 2) and 4) to converge the white balance.
6) After the adjustment, set ACL. SW ON.</td></tr>
<tr><td>Skin color</td><td>REFERENCE 1
in Factory mode
COLOR....."3" Key
TINT …....."4" Key</td><td>Color balance adjustment
After adjusting the white balance, check the skin color of figures in LD still pictures. If the color is not natural, adjust it with the keys on the remote control unit.</td></tr>
<tr><td colspan="4">(Reference) Adjustment values using the Minolta color-difference meter (CA-100)
<table>
<tr><th></th><th></th><th></th><th>NTSC</th><th>HD</th><th>PC</th></tr>
<tr><td rowspan="6">White Balance</td><td rowspan="3">20% Window-Step signal (–3dB)</td><td>x</td><td>291</td><td>291</td><td>291</td></tr>
<tr><td>y</td><td>307</td><td>307</td><td>307</td></tr>
<tr><td>Y</td><td>3.9</td><td>2.9</td><td>2.5</td></tr>
<tr><td rowspan="3">80% Window-Step signal (–3dB)</td><td>x</td><td>291</td><td>291</td><td>293</td></tr>
<tr><td>y</td><td>307</td><td>307</td><td>301</td></tr>
<tr><td>Y</td><td>87.2</td><td>87.2</td><td>64.3</td></tr>
<tr><td rowspan="2">Skin Color</td><td rowspan="2">Window -chroma signal</td><td>x</td><td>466</td><td>428</td><td>——</td></tr>
<tr><td>y</td><td>388</td><td>377</td><td>——</td></tr>
</table></td></tr>
<tr><td rowspan="2">9</td><td rowspan="2">MASK Level adjustment</td><td rowspan="2">Any input</td><td>DRIVE ADJ mode
in Factory mode
R SIDE LEVEL
....."10" Key
G SIDE LEVEL
....."11" Key
B SIDE LEVEL
....."12" Key</td><td>Side mask Color/Level adjustment
Set to the indicated value with the keys on the remote control unit.
(refer to DRIVE ADJ Mode)</td></tr>
<tr><td>DRIVE ADJ mode
in Factory mode
R FULL LEVEL
....."BS5" Key
G FULL LEVEL
....."BS7" Key
B FULL LEVEL
....."BS9" Key</td><td>Full mask Color/Level adjustment
Set to the indicated value with the keys on the remote control unit.
(refer to DRIVE ADJ Mode)</td></tr>
</table>

Procedure	Adjusting Item	Input signal	Adjusting Point	Adjusting Method
10	Base Pulse number Adjustment	Any input	SUB VIDEO mode in Factory mode PULSE NUMBER ....."8" Key	Set to the indicated value with the keys on the remote control unit. (refer to SUB VIDEO mode)
		Note) If unnecessarily adjusted, power consumption is changed and the panel is damaged. Adjust only in case of necessity.		
11	ABL Level Value Adjustment	Any input	SUB VIDEO mode in Factory mode ABL LEVEL ...."9" Key	Set to the indicated value with the keys on the remote control unit. (refer to SUB VIDEO mode)
		Note) If unnecessarily adjusted, power consumption is changed and the panel is damaged. Adjust only in case of necessity.		
12	ABL Level Offset adjustment	Any input	REFERENCE 1 in Factory mode ABL LEV OFFSET ....."BS9" Key	Adjust to the ABL value mentioned on the "Drive voltage label" at the chassis of the glass panel.
		Note) If unnecessarily adjusted, power consumption is changed and the panel is damaged. Adjust only in case of necessity.		
13	Pulse Number Offset adjustment	Any input	REFERENCE 1 in Factory mode PLS NUM OFFSET ....."BS11" Key	Set to the indicated value with the keys on the remote control unit. (refer to REFERENCE 1 mode)
		Note) If unnecessarily adjusted, power consumption is changed and the panel is damaged. Adjust only in case of necessity.		



Adjusting points and Measuring points



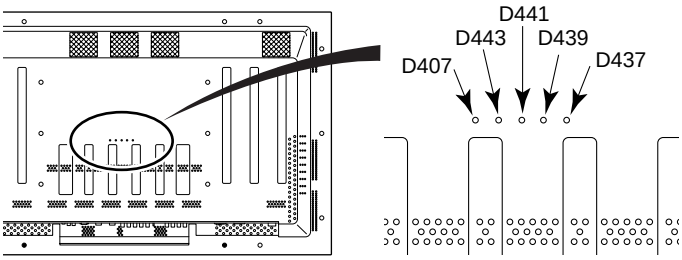
Adjusting points and Measuring points

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DIAGNOSIS METHOD

This PDP has several protection circuits, and the operation of the circuits activate power down circuit and set the unit automatically to standby mode in order to protect the circuit.
Power shut down operation of the unit can roughly be diagnosed by LED indicators at Main Power Assy.
Lighting of LEDs can be confirmed through five holes on Rear Panel.



■ Diagnosis of malfunctions when power down occurs (in lighting LEDs at Main Power Assy)

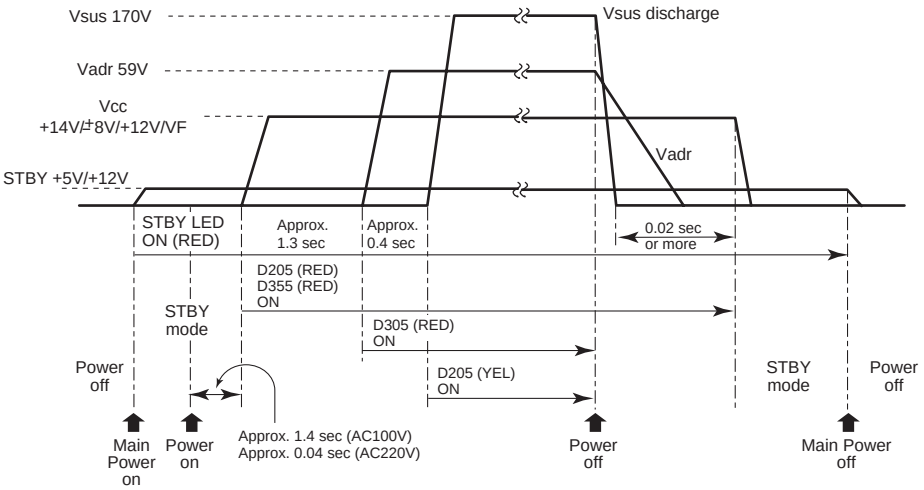
Lighting LED	The state of circuit	P.D. circuit in operation	Diagnosis	Failure points	Estimated failure parts
D407	High between base & emitter of Q415	VSUS OVP	When RCC Control (A) Assy is replaced, P.D. does not occur.	RCC Control (A) Assy	IC203 • Q208 • R232 • D224 • 226
			When OTL Control(A) Assy is replaced, P.D. does not occur.	OTL Control (A) Assy	IC204 • Q209 • 210 • R260
			Even when RCC Control(A) Assy and OTL Control(A) Assy are replaced, P.D occurs.	MAIN POWER Assy	IC201 • 202
	High between base & emitter of Q417	VADR OVP	When RCC Control (B) Assy is replaced, P.D. does not occur.	RCC Control (B) Assy	IC303 • Q305 • R316 • 314
			When OTL Control (B) Assy is replaced, P.D. does not occur.	OTL Control (B) Assy	IC304 • Q306 • 307 • R346
			Even when RCC Control(B) Assy and OTL Control (B) Assy are replaced, P.D occurs.	MAIN POWER Assy	IC301 • 302
	High between base & emitter of Q419	14V OVP	When RCC Control (C) Assy is replaced, P.D. does not occur.	RCC Control (C) Assy	IC353 • Q353 • R364 • D362 • 364
			When OTL Control(C) Assy is replaced, P.D. does not occur.	OTL Control (C) Assy	IC354 • Q356 • 357 • R396
			Even when RCC Control (C) Assy and OTL Control (C) Assy are replaced, P.D occurs.	MAIN POWER Assy	IC351 • 352
	D408 Anode is High / High between base & emitter of Q426	VSUS UVP	When CN205 is disconnected, P.D. occurs, and when RCC Control (A) Assy is replaced, P.D. does not occur.	RCC Control (A) Assy	IC203 • Q208 • R232 • 254 • C221
			When CN205 is disconnected, P.D. occurs, and when OTL Control (A) Assy is replaced, P.D. does not occur.	OTL Control (A) Assy	IC204 • Q209 • 210 • R260
			When CN205 is disconnected, P.D. occurs, and even when RCC Control (A) Assy and OTL Control (A) Assy are replaced, P.D occurs.	MAIN POWER Assy	IC201 • 202 • D212 • 214
			When CN3401 is disconnected, P.D. does not occur.	X DRIVE Assy	Pulse module IC3402 • 3405
			When CN3601 is disconnected, P.D. does not occur.	Y DRIVE Assy	Pulse module IC3604 • 3609 • 3610
	D408 Anode is High / High between base & emitter of Q416	VADR UVP	When CN205 is disconnected, P.D. occurs, and when RCC Control (B) Assy is replaced, P.D. does not occur.	RCC Control (B) Assy	IC303 • Q305 • R316 • 338 • D320 • C317
			When CN205 is disconnected, P.D. occurs, and when OTL Control (B) Assy is replaced, P.D. does not occur.	OTL Control (B) Assy	IC304 • Q306 • 307 • R346

Lighting LED	The state of circuit	P.D. circuit in operation	Diagnosis	Failure points	Estimated failure parts
D407	D408 Anode is High/ High between base & emitter of Q416	VADR UVP	When CN205 is disconnected, P.D. occurs, and even when RCC Control (B) Assy and OTL Control (B) Assy are replaced, P.D occurs.	MAIN POWER Assy	IC301 • 302 • Q302
			When CN205 is disconnected, P.D. does not occur.	CABLE Assy	
	D408 Anode is High/ High between base & emitter of Q418	14V UVP	When CN306 & 354 are disconnected, P.D. occurs.	MAIN POWER Assy 14V D/D CONV. BLOCK	RCC Control (C) Assy • OTL Control (C) Assy • IC351 • 352
			When CN306 is disconnected, P.D. does not occur.	ANALOG VIDEO Assy	
			When CN354 is disconnected, P.D. does not occur.	Y DRIVE Assy IC5V D/D CONV. BLOCK	IC852
	D408 Anode is High/ High between base & emitter of Q421	12V UVP	When CN355 is disconnected, P.D. occurs.	MAIN POWER Assy 12V D/D CONV. BLOCK	RCC Control (C) Assy • OTL Control (C) Assy • IC351 • 352 IC551 • 601 • Q554 • 555 • 604 • 605
			When CN356 is disconnected, P.D. does not occur.	DIGITAL VIDEO Assy D/D CONV. BLOCK	
	D408 Anode is High/ High between base & emitter of Q420	8V UVP	When CN306 is disconnected, P.D. occurs.	MAIN POWER Assy 8V D/D CONV. BLOCK	RCC Control (C) Assy • OTL Control (C) Assy • IC351 • 352
			When CN306 is disconnected, P.D. does not occur.	ANALOG VIDEO Assy	
	D408 Anode is High/ High between base & emitter of Q435	–8V UVP	When CN306 is disconnected, P.D. occurs.	MAIN POWER Assy –8V D/D CONV. BLOCK	RCC Control (C) Assy • OTL Control (C) Assy • IC351 • 352 • D373
			When CN306 is disconnected, P.D. does not occur.	ANALOG VIDEO Assy	
	D405 Anode is High	B OVP		MAIN POWER Assy PFC BLOCK	IC131
	High between base & emitter of Q111	AC200V P.D.	AC power input is appropriate.	MAIN POWER Assy STB BLOCK	IC111 • 112 • 113 • T111
	D852 Anode is High.	VF OVP		Y DRIVE Assy	IC852 • 853 • 854
D407 • D443	TP555 Hi	5V OVP		DIGITAL VIDEO Assy 5V D/D CONV.BLOCK	IC551
	TP556 Hi	5V UVP			
	TP604 Hi	3.3V OVP		DIGITAL VIDEO Assy 3.3V D/D CONV. BLOCK	IC601
	TP603 Hi	3.3V UVP			
	TP555 Lo	ICP OPEN	When the power supply is turned on, a part of the screen shines in white momentarily and P.D. occurs.	CABLE Assy RESONATOR BLOCK	IC1008 • Q1001–Q1006
	TP556 Lo				
	TP603 Lo			Address Module	UPD16340
	TP604 Lo			DIGITAL VIDEO Assy DIGITAL BLOCK	IC2201
D407 • D441	D3457 Anode is High.	12V OCP		X DRIVE Assy Pulse Module	Pulse module IC3402 • 3405
				X DRIVE Assy RESET DRIVE BLOCK	Q3401 • 3402 • 3403
D407 • D439	K706Hi	VOFS OVP		Y DRIVE Assy VOFS D/D CONV. BLOCK	IC702 • 704
	K705Hi	VOFS UVP	Drive section (drive control signals & drive signal output elements) in normal operation.	Y DRIVE Assy VOFS D/D CONV. BLOCK	IC701 • 702 • 704
			VOFS D/D Conv. Block in normal operation	Y DRIVE Assy SUS_MSK BLOCK	R3717 • 3730
	K754Hi	VH OVP		Y DRIVE Assy VH D/D CONV. BLOCK	IC751 • 752

Lighting LED	The state of circuit	P.D. circuit in operation	Diagnosis	Failure points	Estimated failure parts
D407 • D439	K751Hi	VH UVP	Drive section (drive control signals & drive signal output elements) in normal operation.	Y DRIVE Assy VH D/D CONV. BLOCK	IC751 • 752 • 755
			VH D/D Conv.Block in normal operation	SCAN MODULE	SCAN IC
			Scan Module in normal operation.	Y DRIVE Assy IC5V D/D CONV. BLOCK	IC851 • 852 • 853
	K804Hi	VRN OVP	Drive section (drive control signals & drive signal output elements) in normal operation.	Y DRIVE Assy VRN D/D CONV. BLOCK	IC801 • 803
	K801Hi	VRN UVP	VRN D/D Conv. Block in normal operation.	Y DRIVE Assy VRN D/D CONV. BLOCK	IC801 • 802 • 803
				YDRIVE Assy SUS_MSK BLOCK	R3717 • 3730
	K854Hi	IC5V OVP		Y DRIVE Assy IC5V D/D CONV. BLOCK	IC851 • 853
D407 • D437	K3607Hi	12V OCP	Output voltage of IC3606, 3607, 3608 are normal		Pulse module IC3604 • 3605 • 3609 • 3610
			Output voltage of IC3606, 3607, 3608 are abnormal.		IC3611 • 3612 • 3613 • 3615 • 3601 • 3602 • 3603 • 3614
	K3704Hi	RESET OCP		Y DRIVE Assy RESET BLOCK	Q3708
	D3751 Anode is High.	DRIVE STOP P.D.		DIGITAL VIDEO Assy	IC2201 (IC23)

OVP: Over Voltage Protection, OCP: Over Current Protection, UVP: Under Voltage Protection

■ Diagnosis of malfunctions by power coming up sequence



The power coming up sequence of power supply

■ Simple diagnosis using LEDs at Main Power Assy

The state of LEDs at Main Power Assy	Estimated P.D. circuit in operation
After D205 lights up in red, D407 lights up. (D205 lights up in yellow in normal operation.)	VSUS UVP
After D305 is put out the light, D407 lights up. (D305 lights up in red in normal operation.)	VADR UVP
After D355 is put out the light, D407 lights up. (D355 lights up in red in normal operation.)	14V • 12V • ±8V UVP, B OVP, VF OVP
D407 lights up at the stand-by mode.	AC200V P.D.
After D205, D305 and D355 lights up normally, D407 lights up.	VSUS OVP
After D305 and D355 lights up normally, D407 lights up.	VADR OVP
After D355 lights up normally, D407 lights up.	14V OVP

Diagnosis when under voltage is detected at V SUS / V ADR voltage lines.

- Disconnect connector CN205 P5 at Main Power Assy and turn on the power.
  If the power is turned on and D205 at Main Power Assy lights up in yellow, cause of the under voltage is not inside Main Power Assy.
  If P.D. occurs, V SUS / V ADR DC-DC Converter block at Main Power Assy may be defective.

Diagnosis when under voltage is detected at 14V, 12V, +-8V voltage lines

- Be sure to turn off High Power CUT SW, S301 at Power Supply Assy. (important)
- Disconnect CN306 P6,CN355 P4, CN354 P3, CN353 P2 at Main Power Assy one by one, and turn on the power of the unit.
  (Do not disconnect all four connectors at the same time and turn on the power. Because this leads to no load of power supply and that is very dangerous.)
- When the power is turned on with a connector disconnected, and if Low power supply DC-DC Converter operates normally with lighting D355 and D205 in red, cause of under voltage is not inside Main Power Assy.
- If P.D. still occurs after disconnecting each connector, 14V DC-DC Converter block at Main Power Assy may be defective.

The function of High Power CUT SW, S301 at Main Power Assy

- When S301 is turned off, V SUS / V ADR DC-DC Converter does not operate. However, 14V DC-DC Converter operates normally.
- Therefore, diagnosis from Signal Input circuit to before Drive circuit is possible without danger of breaking Drive section by mistake.

AC100V/AC200V Change-over SW, S111 at Main Power Assy

- Only PDP-502MXE is set to AC200V.
- When the SW is set to AC100V, AC200V P.D. detecting circuit will operate. (Even when the unit is in Stand-by mode, the detecting circuit is in operation.)

Diagnoses of the malfunctions by LEDs at Digital Video Assy, D2302/D2306

LED	Title (Color of Light)	The timing of lighting	Estimated failure parts
D2302	STOP (GREEN)	Lights on in normal operation It lights up at every V rate, when Drive pulse output from IC2201 is normal.	Around IC2101/IC2151/IC2801 /X3202 (Xtal)
D2302	PBusy (RED)	Light is put off in normal operation. It lights up when System Control CPU (IC3604) and Panel CPU are communicating.	Around Connector and Panel CPU and X3202/X3201 (Xtal)
D2306	IP Busy (RED)	It lights up at every V rate during IP processing.(Video input) Light is put off when IP processing is not done. (PC input)	Around IC1801/IC1901/IC2001

Diagnosis of malfunctions other than the operation of protection circuits

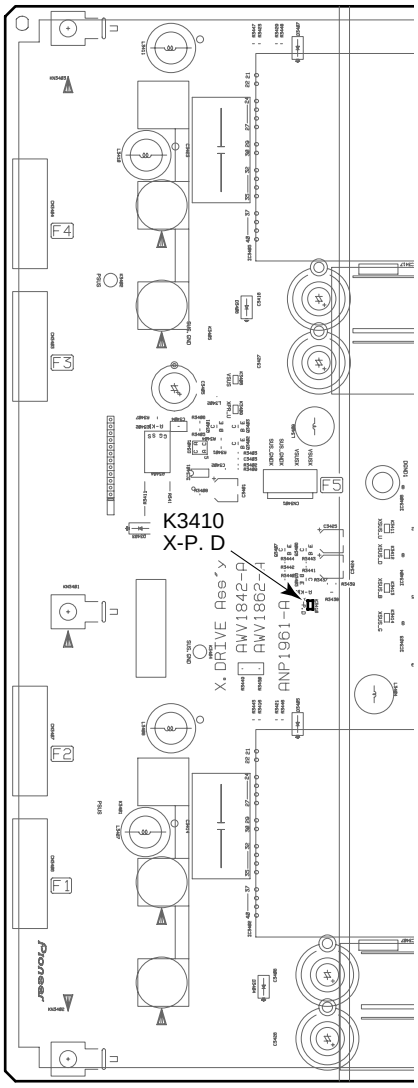
The state of the unit	Estimated failure mode
STBY indicator does not light at all	● AC power input is not appropriate. ● Stand-by power supply block is defective. ● U-com Assy is defective. ● Connectors disconnected.
Power does not go on Power shuts down immediately after power on. (back to Stand-by)	● U-com Assy is defective.
Dots like luminance spots appear on the screen.	● Drive section voltage is abnormal. (VSUS, VADR, VOFS, VH, VRN) ● X Drive Assy and Y Drive Assy are defective. ● Scan Module is defective.
Screen does not emit lights at all.	DIGITAL VIDEO Assy is defective.
Fuse is blown.	● Q131–Q136, D131, IC131 Defective ● R133, R134, R168 Defective ● Q201, Q202, RCC Control (A) Assy, OTL Control (A) Assy Defective ● Q301, Q302, RCC Control (B) Assy, OTL Control (B) Assy Defective ● Q351, Q354, RCC Control (C) Assy, OTL Control (C) Assy Defective

■ Note for repairing in case of blown fuses

- Never turn on the power of the unit again just by replacing the fuse, when the fuse is blown.
  Because, it is rare case that the fuse itself is defective. If the power is turned on again without resolving the cause of over current, the unit is damaged more.
- Be sure to check parts such as In-Rush current protective resistors where excessive current may flow.
  Because, they may be damaged secondarily.
- Be sure to find out all defective parts caused by a blown fuse.
  Because, if the power is turned on with even one defective part left in the circuit, this may lead the other parts to become defective again.

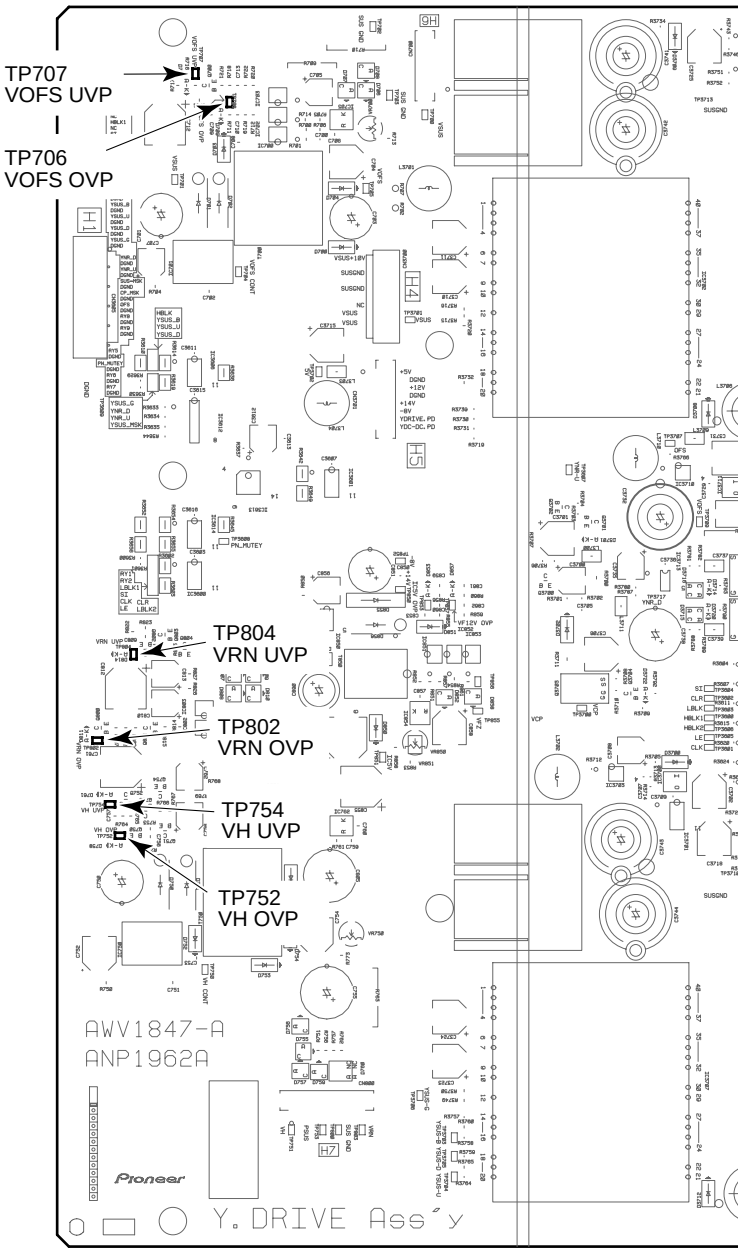
X DRIVE ASSY

TOP



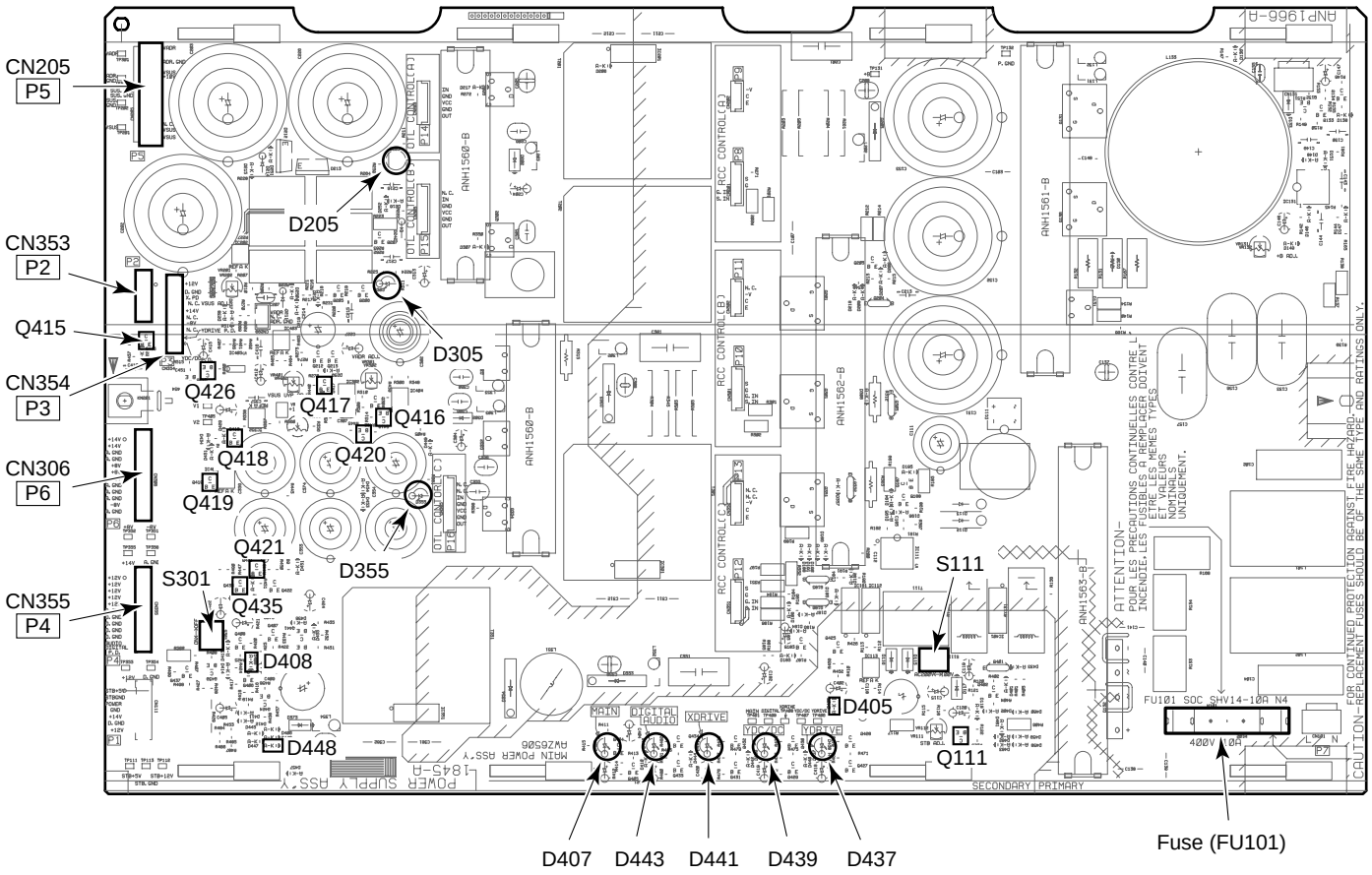
Y DRIVE ASSY

TOP



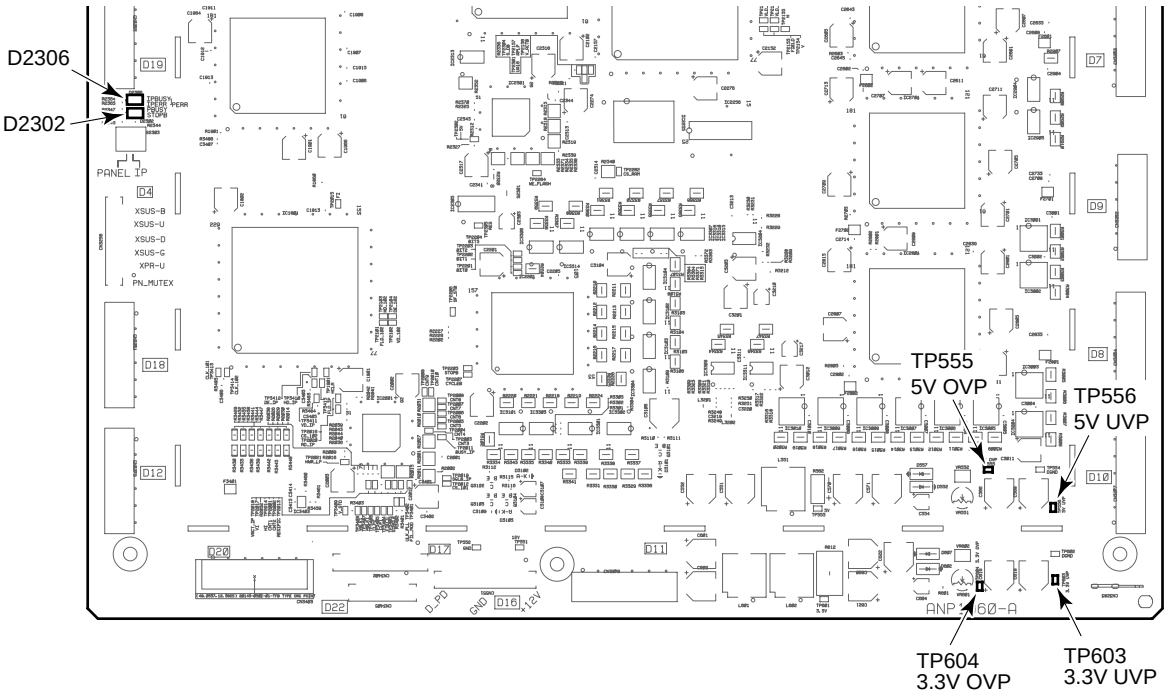
TOP

MAIN POWER ASSY

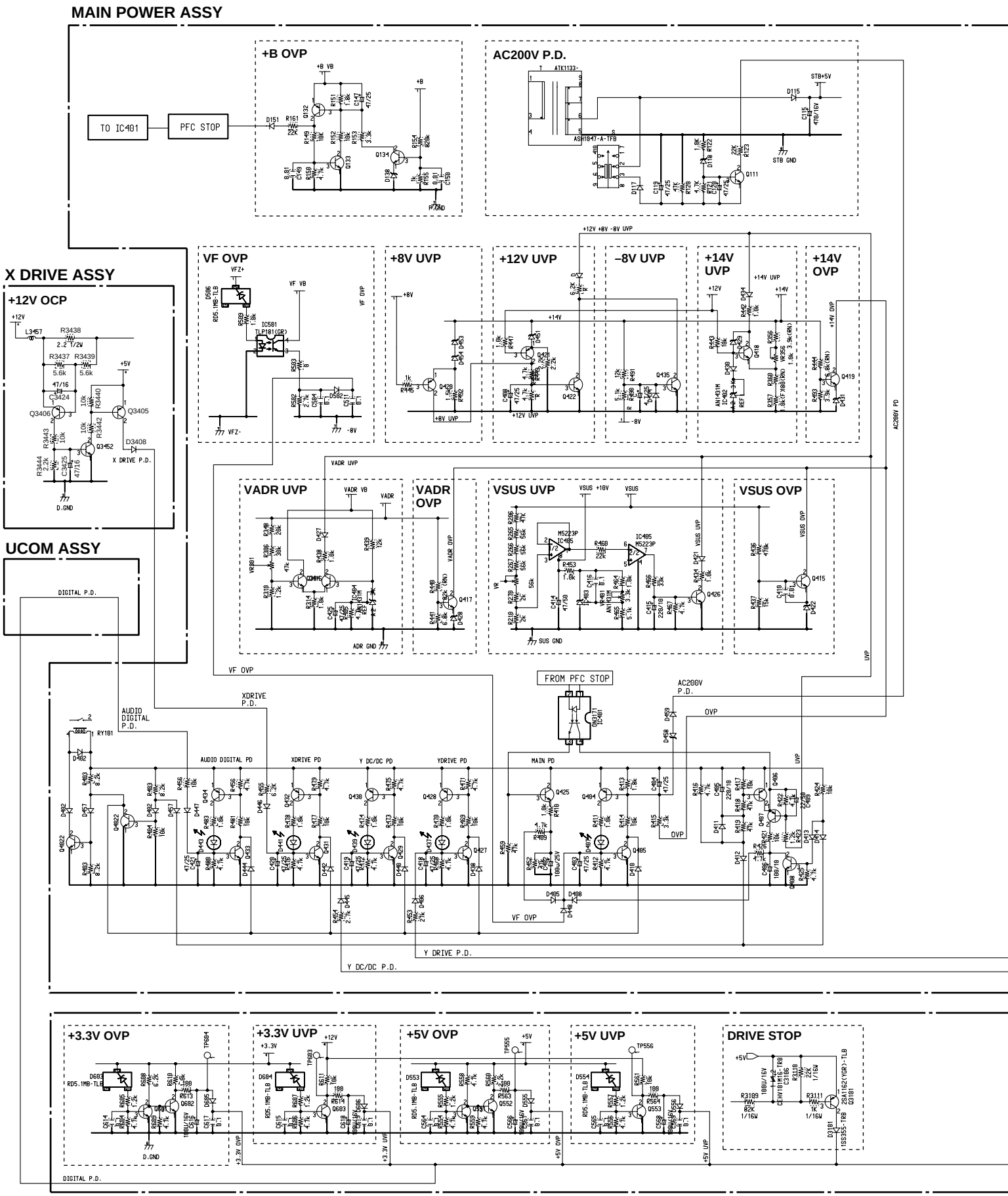


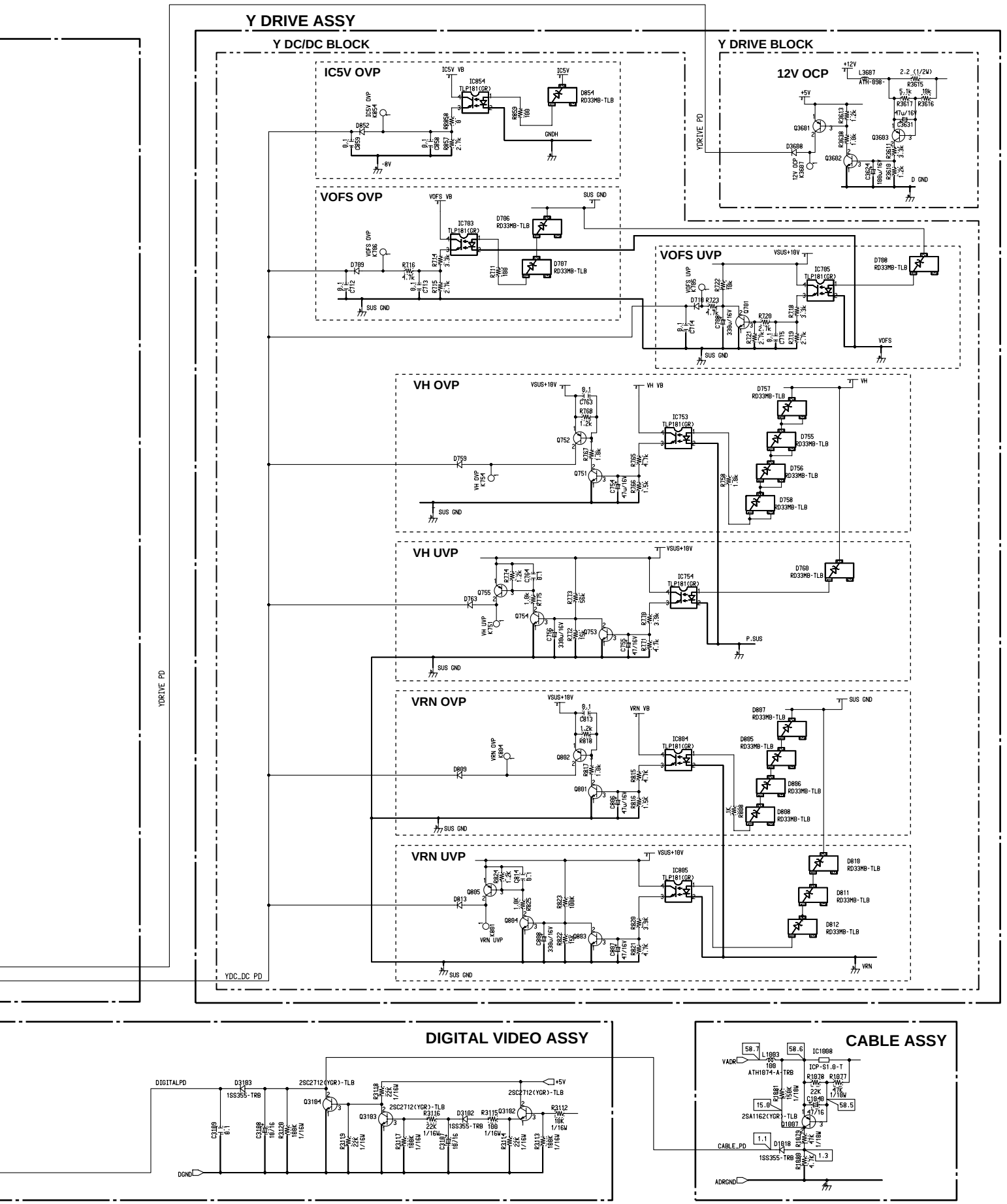
TOP

DIGITAL VIDEO ASSY



Protection Circuits

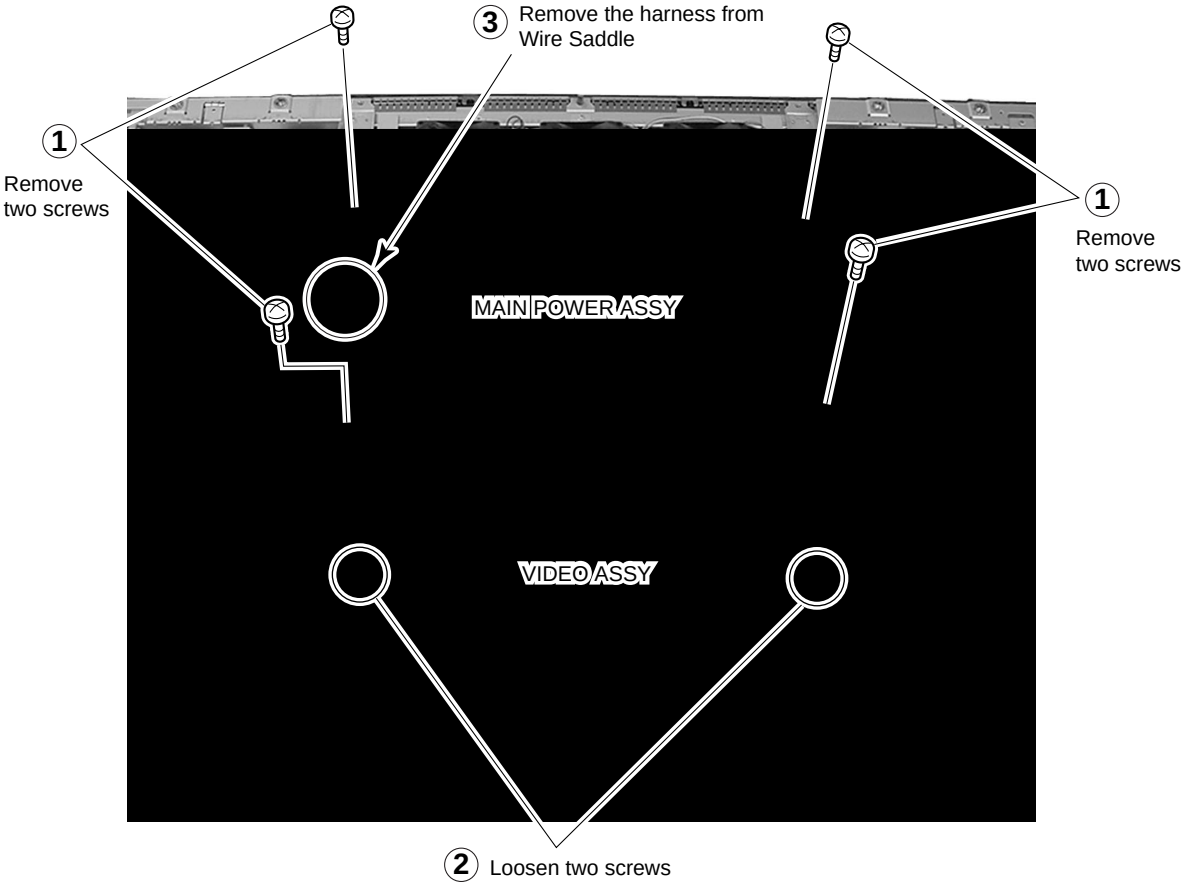


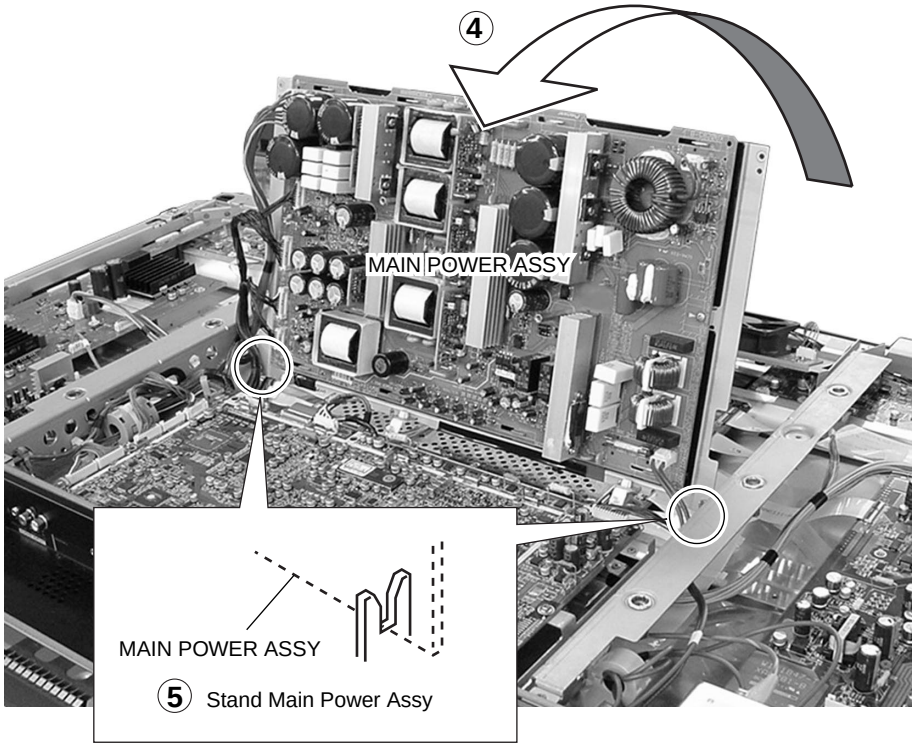

Y DRIVE ASSY
Y DC/DC BLOCK
Y DRIVE BLOCK
IC5V OVP
12V OCP
VOFS OVP
VOFS UVP
VH OVP
VH UVP
VRN OVP
VRN UVP
YDRIVE PD
YDC_DC PD
SUS GND
GNDH
D GND
VOFS
VH
VRN
P.SUS
DIGITAL VIDEO ASSY
DIGITALPD
DGND
CABLE ASSY
CABLE_PD
ADRGND

■ Service Position

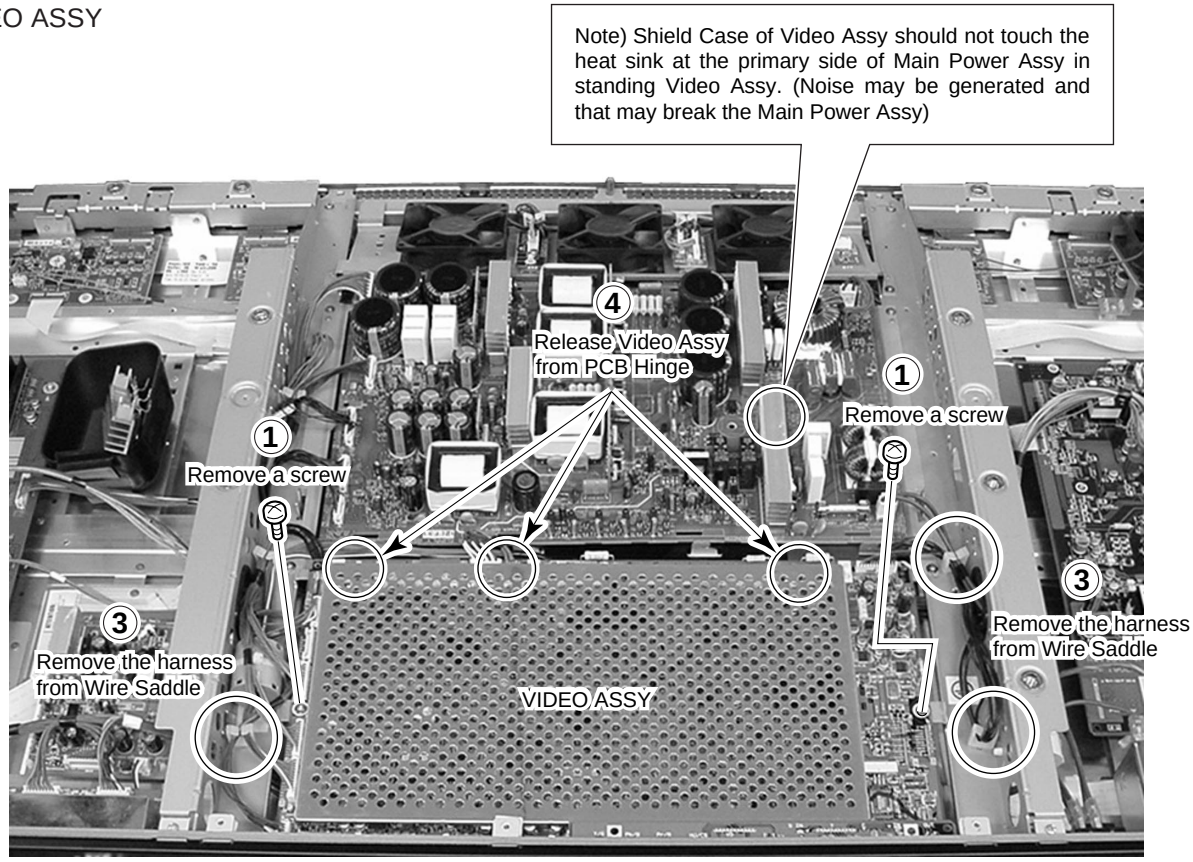
Note: This photograph shows other models. However, the work method is the same.

1. MAIN POWER ASSY

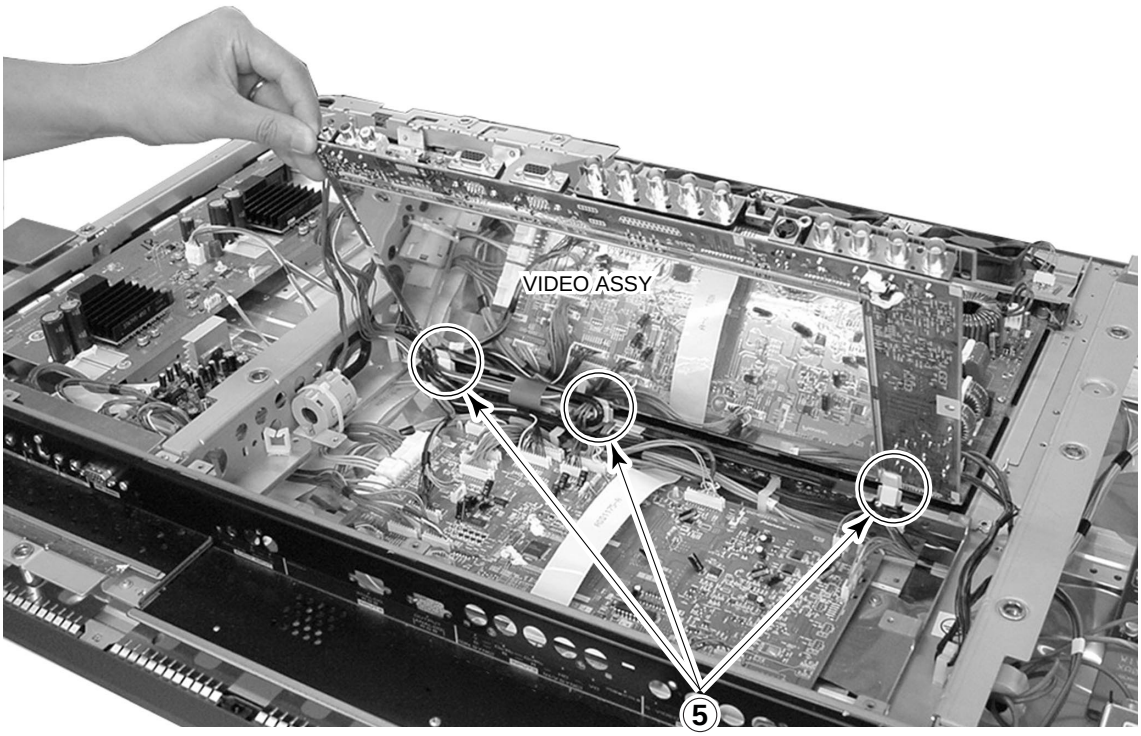




2. VIDEO ASSY



2 Remove all screws and nuts from Terminal Panel



After pulling VIDEO Assy backward to release it from Terminal Panel, insert it to the PCB Hinge again.

7.1.2 DISASSEMBLY

1. Removing Front Case (Figure 1)

1) Secure the unit on the stand in the upright position.
2) Remove 14 screws Ⓐ: BBZ40P160FZK at the outermost circumference of Rear Case.
   There is one screw with a screw collar. Pay attention to the direction of the collar. (Refer to Figure 1)
3) Remove 4 screws Ⓑ : BBZ40P160FZK.
4) In this condition, only Front Case can be detached from the unit by pulling out Front Case in the forward direction.

Note) Be careful of Remote Receiver Holder and SW Holder in detaching Front Case, because they are not fixed to Front Case.

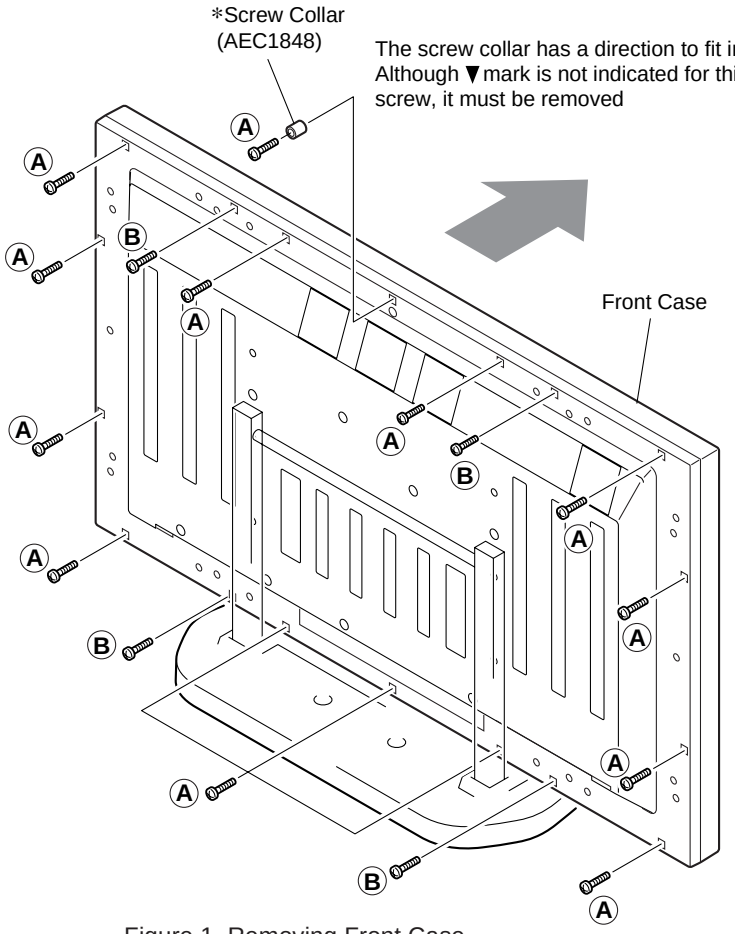


Figure 1 Removing Front Case

2. Removing Rear Case (Figure 2)

1) Place the unit with Front Panel down on a flat cushion.
2) Remove Hole Rivets (AMR2969).
3) Remove a screw rivet (AEC1852).
4) Remove 14 screws Ⓐ. (Refer to Removing Front Case)
5) Remove 17 screws Ⓒ: AMZ30P100FZK.
6) In this condition, Rear Case can be detached.

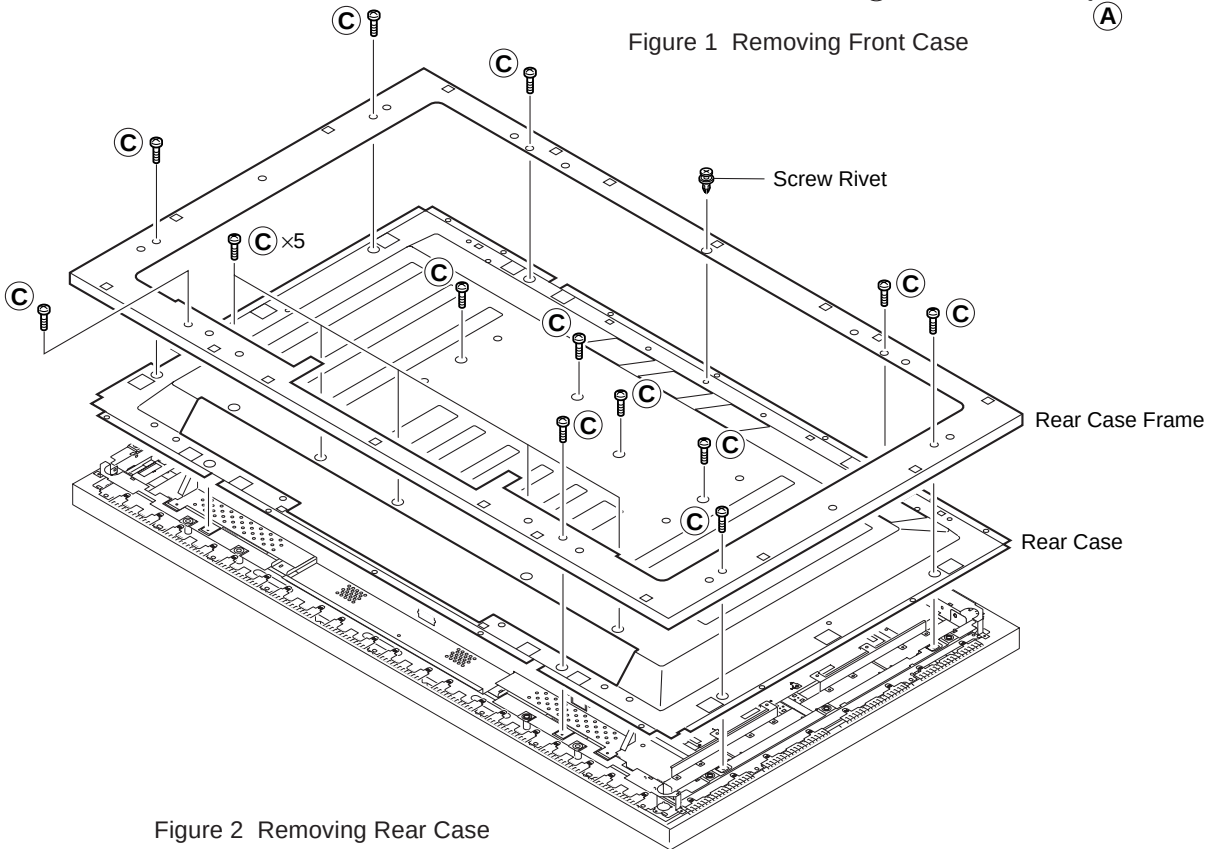


Figure 2 Removing Rear Case

3.Removing and installing Front Protection Panel

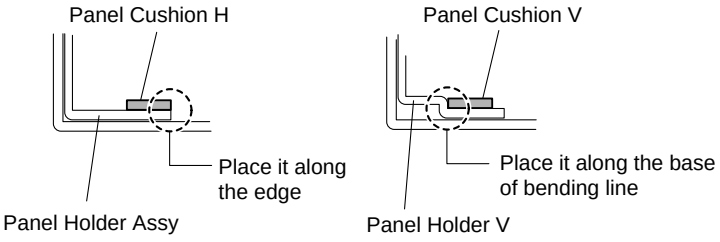
1) Remove all 30 screws Ⓓ: BPZ30P080FZK that fixes Panel Holder V and Panel Holder Assy to Front Case.
2) Remove Front Protection Panel and replace it.
3) Install Front Protection Panel by attaching to the bottom left side first, and then attach a Corner Cushion to each corner.

Note) When new Front Protection Panel is installed, Front Cushion H and Front Cushion V attached to Front Case are not needed to be replaced.

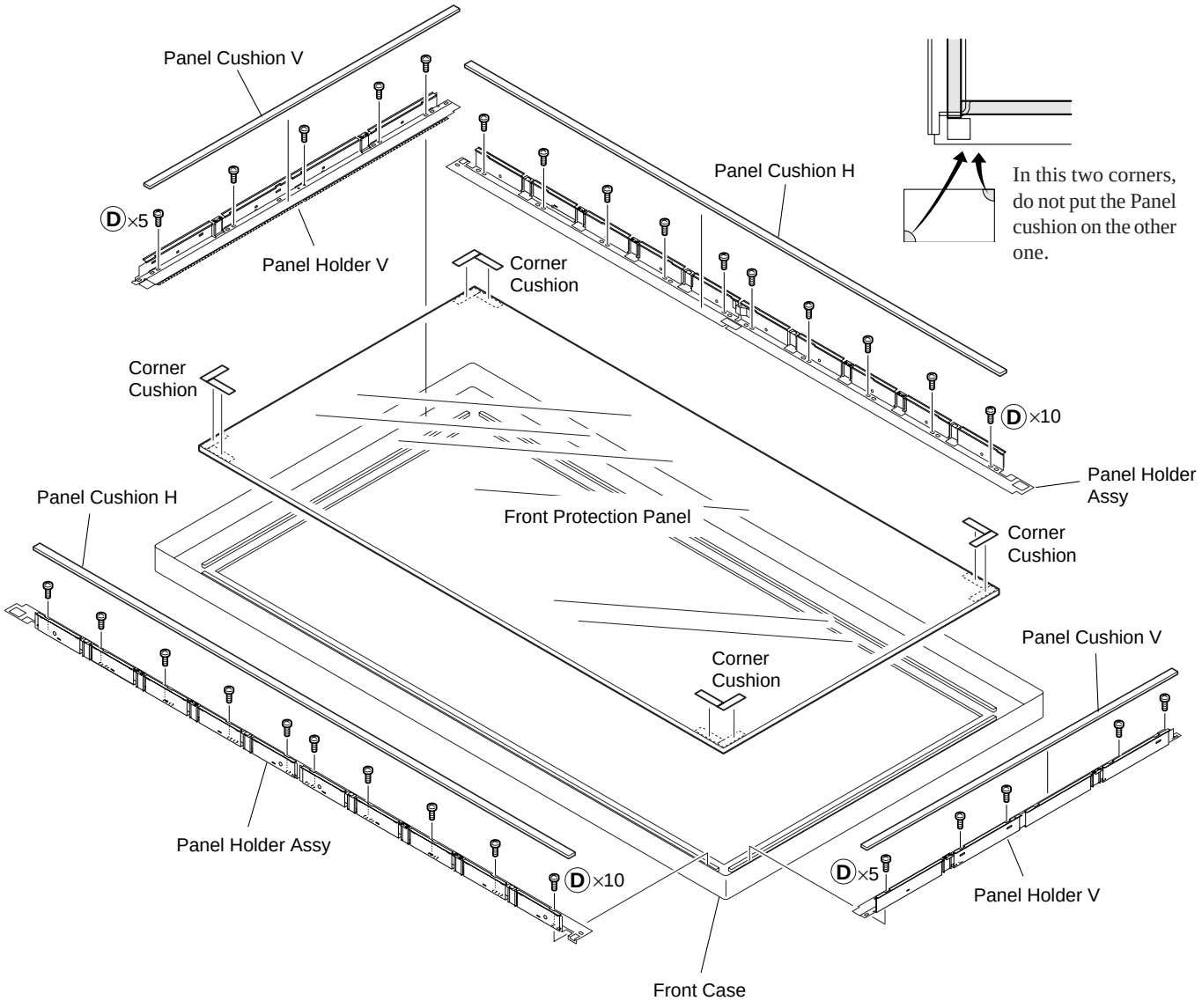
4) Assemble Front Case in the opposite order of disassembling it. Mount Panel Holder Assy first, then mount Panel Holder V.

Note)

- Attach Panel Cushion V along the base of bending line of Panel Holder V, and attach Panel Cushion H along the edge of Panel Holder Assy like shown in Figure 3.
- Panel Holder V / Panel Shield V and Panel Holder Assy / Panel Shield H are inlaid fixed structures.
- Be careful not to lose Remote Receiver lens and LED lens, because they are not fixed to any where after removing Panel Holder Assy.



How to attach Panel Cushions



7.1.3 WIRING

When forming the wire cables, be careful not to exert excessive pressure on the cables as this will result in the disconnection of the connectors.

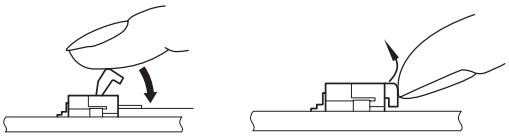
Press-down type lower contact connector

1. Locking

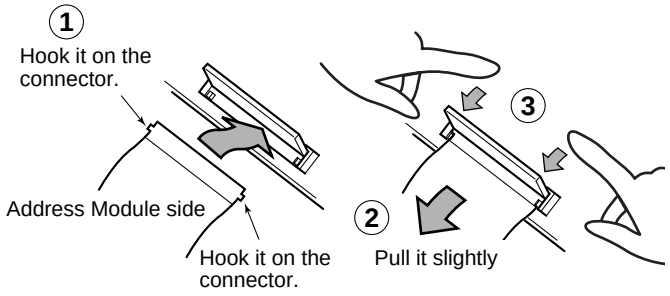
   Lock applying force in the arrow direction so that the connector is pressed down inwards.

2. Unlocking

   Push up with your nail, or something soft.
   Do not use thin tools such as the tip of screwdrivers, because they will damage the electrode.



- Insert the flexible cables straight until the end.
  Insert the flexible cable reinforcing plates in parallel to the connectors. Moreover, insert the horizontal-connecting connectors horizontally.
- In connecting Address Modules and Cable Assy, and in connecting Scan Modules and Y Drive Assy with the flexible cables, hook both edges of the flexible cables on the connectors and fix them, then close the covers.
  Insert the flexible cables in parallel to the connector, otherwise the connectors may be damaged.

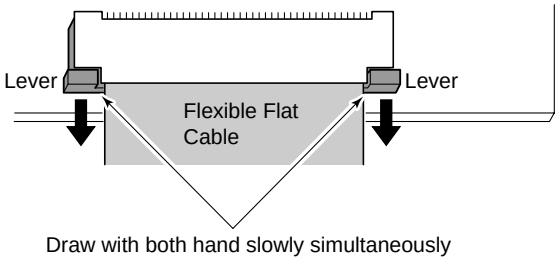


Note) When closing the connector cover, press both edges of the cover by fingers to lock it. Pressing the center of the cover may damage it.

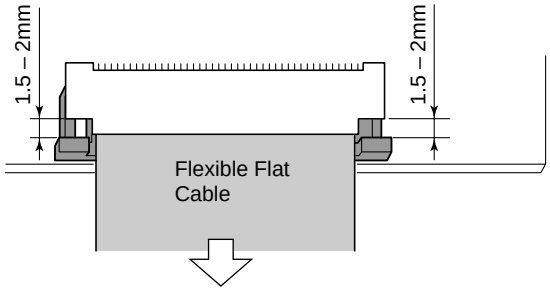
Matters that require attention of upper contact connector (Use with VIDEO ASSY A33 and DIGITAL VIDEO ASSY D20)

■ Lock cancel release step

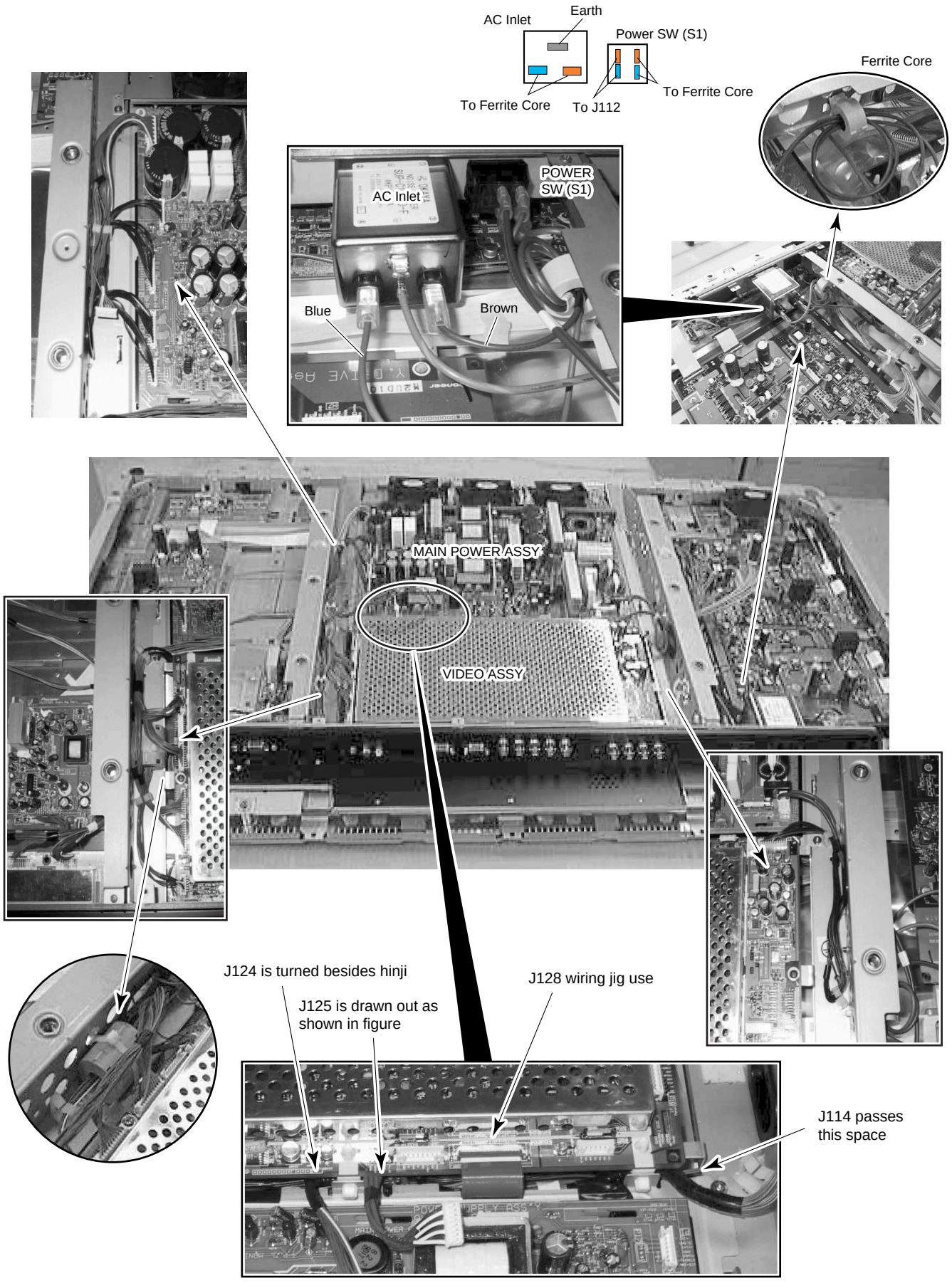
① Throw on lever of **right and left each side** with claw, and please draw in **right and left real time slowly** to orientation of arrow. Then lever is **damaged** that by one side seems to go down.



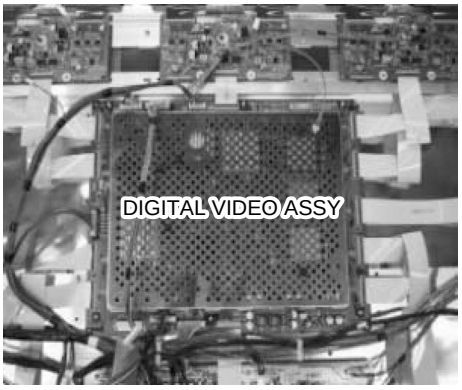
② Clearance of connector main frame and lever is 1.5mm - around 2mm, and lock is removed. (be damaged when it goes down more than this.)
Draw out Flexible Flat Cable lightly to arrow orientation, and please pull up.

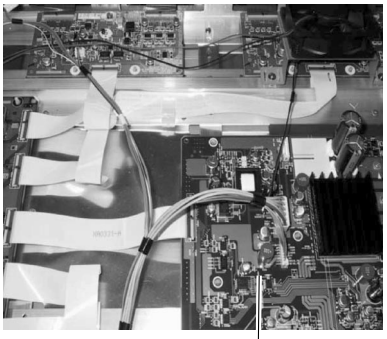


Note: This photograph shows the PDP-502MX/LUCBW/1.



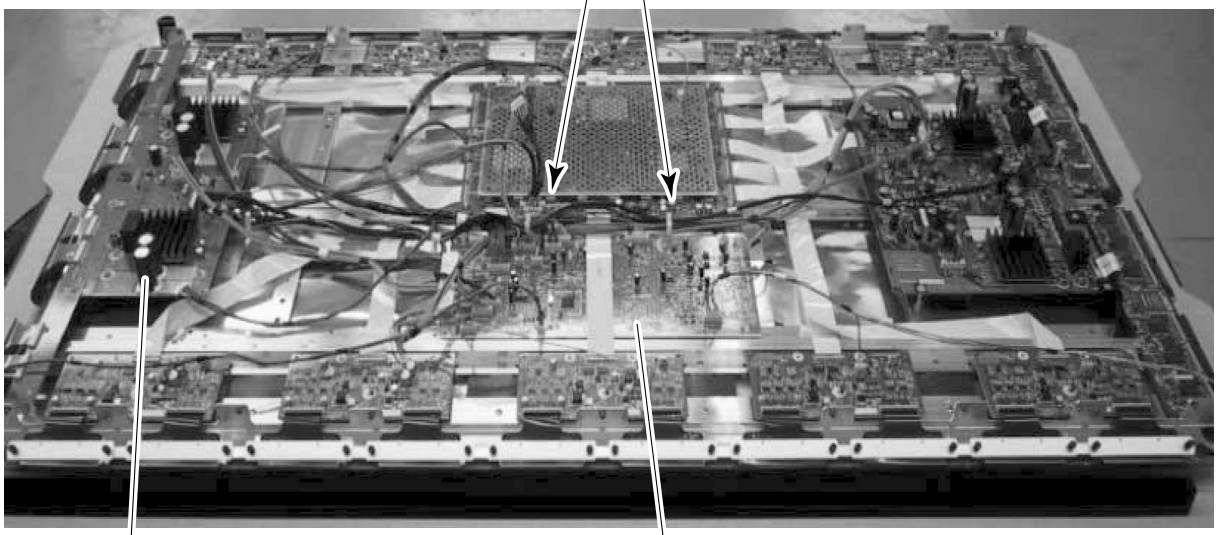
Note: This photograph shows the PDP-502MX/LUCBW/1.

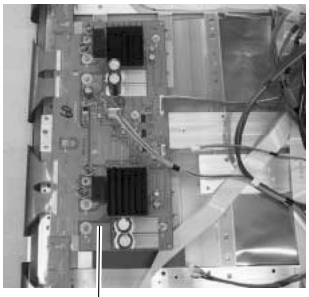




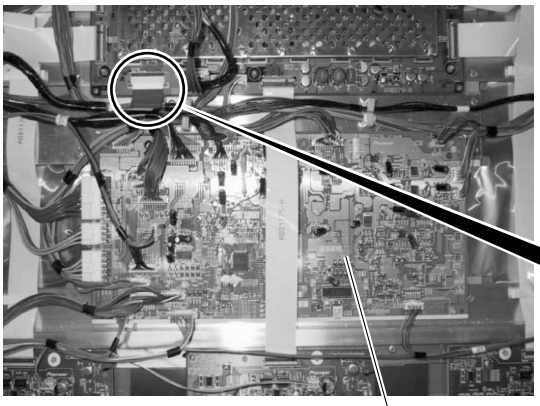
Y DRIVE ASSY

Wire Assy is inserted in a wire saddle, and it is controlled, and it is touched in bottom if possible

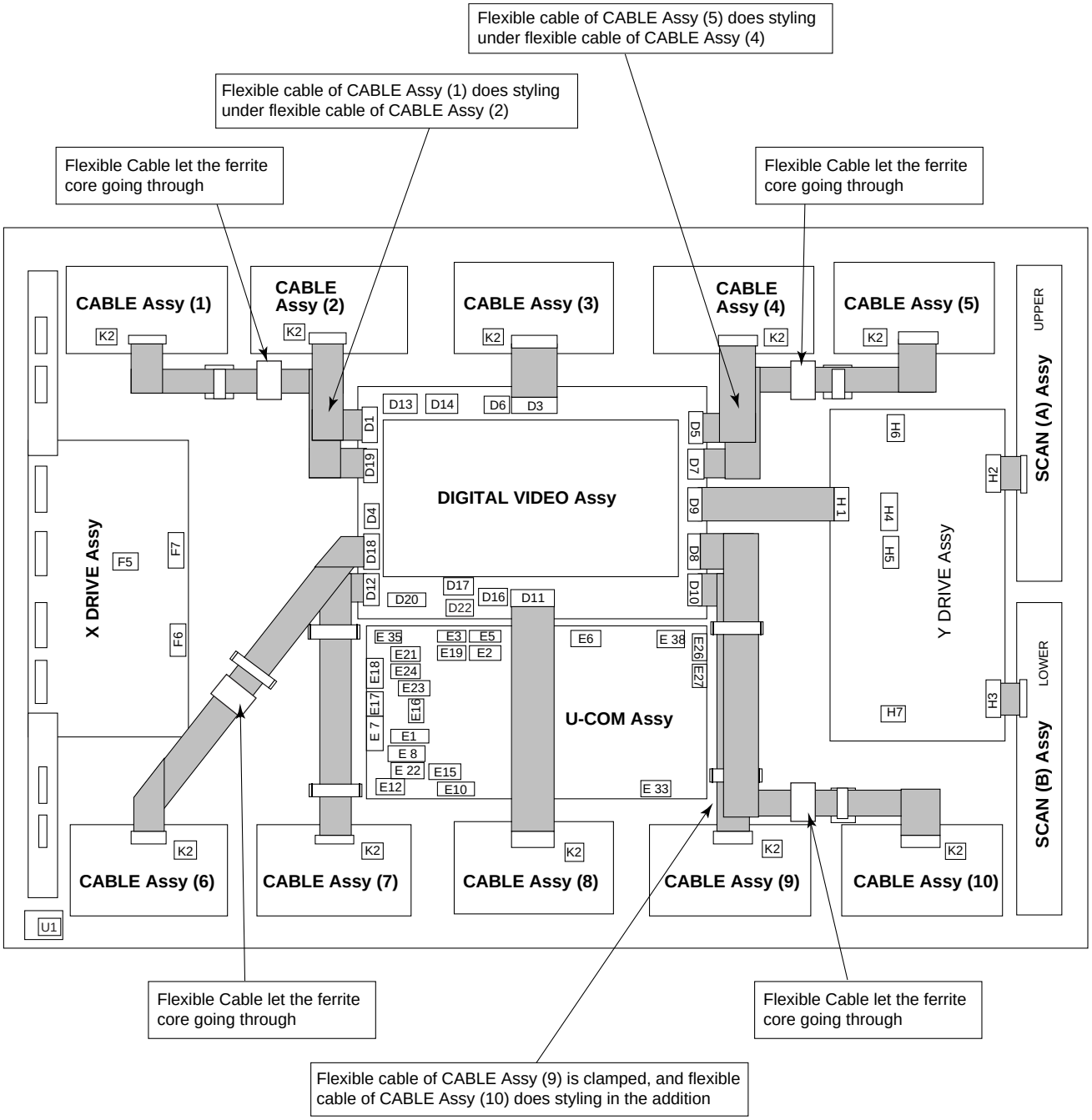




X DRIVE ASSY



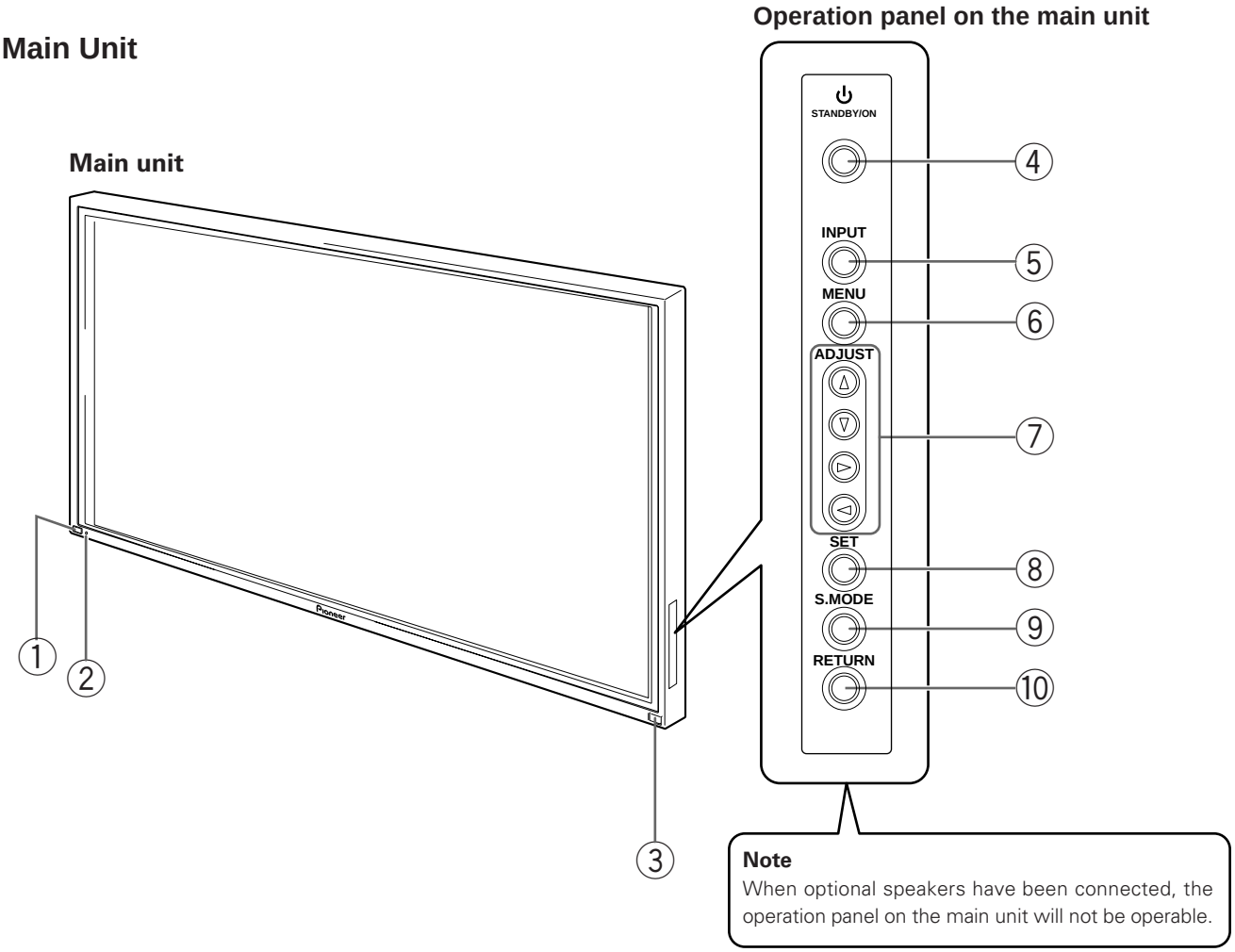
U-COM ASSY


Flexible cable of CABLE Assy (5) does styling under flexible cable of CABLE Assy (4)
Flexible cable of CABLE Assy (1) does styling under flexible cable of CABLE Assy (2)
Flexible Cable let the ferrite core going through
Flexible Cable let the ferrite core going through
CABLE Assy (1)
CABLE Assy (2)
CABLE Assy (3)
CABLE Assy (4)
CABLE Assy (5)
SCAN (A) Assy
UPPER
DIGITAL VIDEO Assy
X DRIVE Assy
Y DRIVE Assy
U-COM Assy
SCAN (B) Assy
LOWER
CABLE Assy (6)
CABLE Assy (7)
CABLE Assy (8)
CABLE Assy (9)
CABLE Assy (10)
K2
U1
Flexible Cable let the ferrite core going through
Flexible Cable let the ferrite core going through
Flexible cable of CABLE Assy (9) is clamped, and flexible cable of CABLE Assy (10) does styling in the addition

8. PANEL FACILITIES AND SPECIFICATIONS

■ PANEL FACILITIES

Main Unit



Main unit

① **Main power switch**
Use to switch the main power of the unit on and off.

② **STANDBY/ON indicator**
This indicator is red during standby mode, and turns to green when the unit is in the operation mode.

③ **Remote control sensor**
Point the remote control toward the remote sensor to operate the unit.

Operation panel on the main unit

④ ⏻ **STANDBY/ON button**
Press to put the display in operation or standby mode.

⑤ **INPUT button**
Press to select input.

⑥ **MENU button**
Press to open and close the on-screen menu.

⑦ **ADJUST (▲/▼/◄/►) buttons**
Use to navigate menu screens and to adjust various settings on the unit.
Usage of cursor buttons within operations is clearly indicated in the on-screen display.

⑧ **SET button**
Press to adjust or enter various settings on the unit.

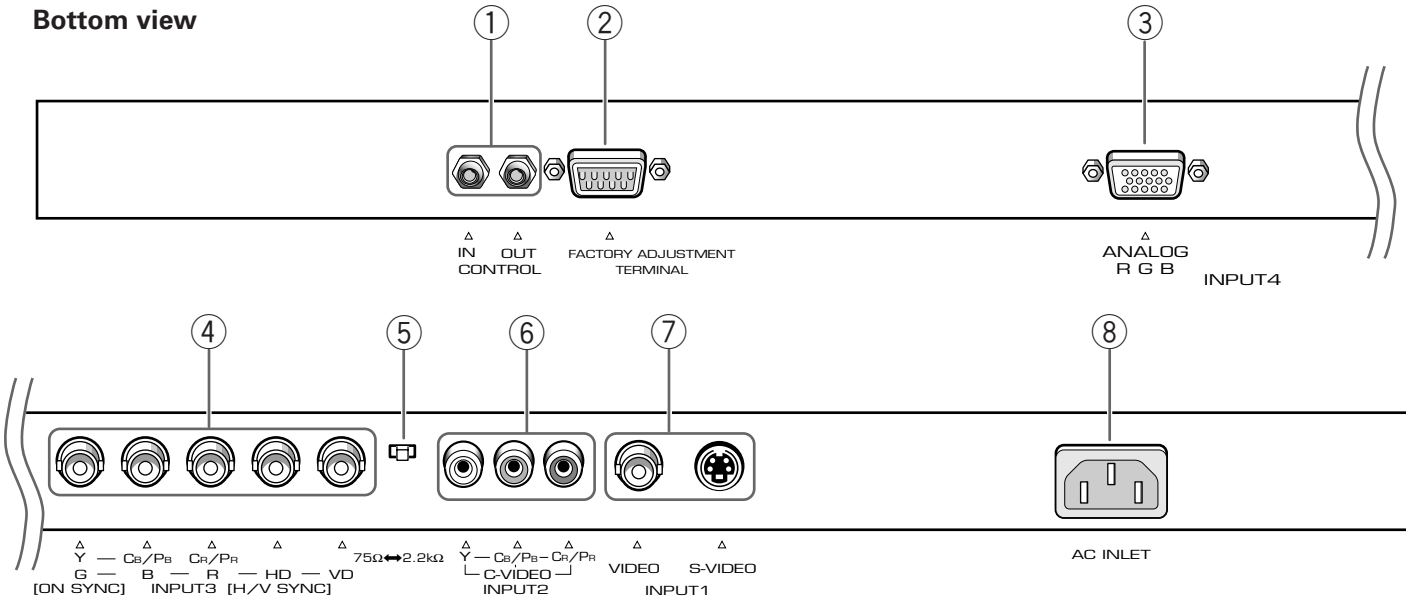
⑨ **S.MODE button**
Press to manually select the screen size.

⑩ **RETURN button**
Press to reset the unit to factory set defaults.

Connection Panel

On this unit there are 4 input systems. There are also CONTROL terminals for connection of PIONEER components with the SR mark. For details regarding a specific connection format, refer to the page written in parenthesis.

Bottom view



① **CONTROL IN/OUT**
For connection of PIONEER components that bear the SR mark. Making CONTROL connection enables control of this unit as a component in a system.

② **FACTORY ADJUSTMENT TERMINAL**
DO NOT MAKE ANY CONNECTIONS TO THIS TERMINAL.
This terminal is used in the factory setup.

③ **INPUT4**
For connection of a personal computer (PC) or similar component. Make sure that the connection made corresponds to the format of the signal output from the connected component.

④ **INPUT3**
For connection of components that have RGB or component output jacks such as a personal computer, DVD player, or external RGB decoder.

⑤ **Synchronizing signal impedance selector switch**
Depending on the connections made at INPUT3, it may be necessary to set this switch to match the output impedance of the connected component's synchronization signal.
When the output impedance of the component's synchronization signal is above 75 Ω, set this switch to the 2.2 kΩ position.

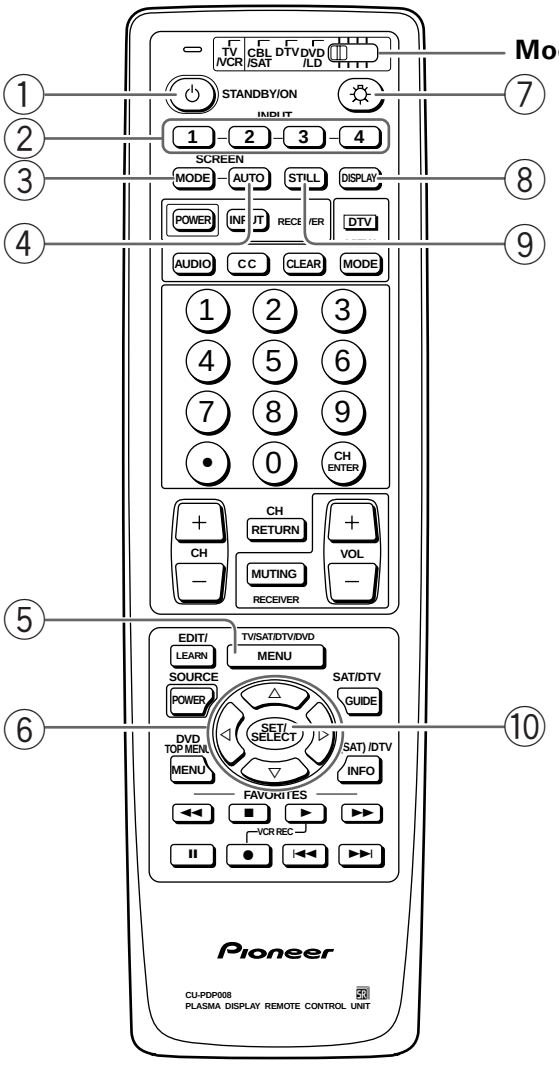
⑥ **INPUT2**
For connection of DVD player with component video output.

⑦ **INPUT1**
For connection of components that have an S-video or composite video output jack such as a video deck, video camera, laser disc player, or DVD player.

Note: It is possible to have connections made to both the VIDEO and S-VIDEO jacks at the same time. However, if simultaneous signals are received, the S-video signal is given priority.

⑧ **AC INLET**
Use to connect the supplied power cord to an AC outlet.

Remote Control Unit



① ⏻ **STANDBY/ON button**
Press to put the unit in operation or standby mode.

② **INPUT buttons**
Use to select the input.

③ **SCREEN MODE button**
Press to manually select the screen size.

④ **AUTO SCREEN button**
Use for automatic selection of screen size.

⑤ **MENU button**
Press to open and close the on-screen menu.

⑥ **ADJUST (▲/▼/◄ /►) buttons**
Use to navigate menu screens and to adjust various settings on the unit.
Usage of cursor buttons within operations is clearly indicated at the bottom the on-screen menu display.

⑦ **Light button**
When this button is pressed, all the buttons on the remote control unit will light. The lighting will turn off if no operations are performed within five seconds. This button is used for performing operations in dark places.

⑧ **DISPLAY button**
Press to view the unit's current input and setup mode.

⑨ **STILL button**
Use to freeze the image currently displayed on the screen.

⑩ **SET/SELECT button**
Press to adjust or enter various settings on the unit.

Notes

- When operating this unit using these buttons, be sure to set the mode switch of the remote control unit to "TV/VCR". (The remote control unit operates this unit only when the mode switch is set to "TV/VCR".)
- This page covers only buttons that operate this unit.

■ SPECIFICATIONS

General

Light emission panel ..... 50 inch plasma display panel
Number of pixels ..... 1280 x 768
Power supply ..... AC 120 V, 60 Hz
Power consumption ..... 468 W
Standby power consumption ..... 0.6 W
External dimensions ..... 1218 (W) x 714 (H) x 98 (D) mm
..... 47-31/32 (W) x 28-1/8 (H) x 3-7/8 (D) inch.
Weight ..... 43 kg (94 lbs. 13 oz.)
Operating temperature range ..... 32 to 104 °F (0 to 40 °C)
Operating atmospheric pressure range
..... 0.8 to 1.1 atmospheric pressure

Input/output

Video

INPUT 1
Input
① BNC jack
● Composite video signal
1 Vp-p/75 Ω/negative sync.
② S terminal (Mini DIN 4 pin)
Y . . . 1 Vp-p/75 Ω/negative sync.
C . . . 0.286 Vp-p/75 Ω

INPUT 2
Input
Component video jacks
Pin jack (x3)
Y . . . 1 Vp-p/75 Ω/negative sync.
C_B/P_B, C_R/P_R
... 0.525 Vp-p/75 Ω
(75% saturation level)

INPUT 3
Input
BNC jack (x5)
① RGB signal (G ON SYNC compatible)
RGB ... 0.7 Vp-p/75 Ω/no sync.
HD/CS, VD ... TTL level
/positive and negative polarity/
75 Ω or 2.2 kΩ
(impedance switch)
G ON SYNC ...
1 Vp-p/75 Ω/negative sync.

② Component video signal
Y ... 1 Vp-p/75 Ω/negative sync.
C_B/P_B, C_R/P_R
... 0.525 Vp-p/75 Ω
(75% saturation level)

INPUT 4
Input
Mini D-Sub 15 pin (socket connector)
① RGB signal (G ON SYNC compatible)
RGB ... 0.7 Vp-p/75 Ω/no sync.
HD/CS, VD ... TTL level
/positive and negative polarity
2.2 kΩ
G ON SYNC
... 1.0 Vp-p/75 Ω/negative sync.
*Compatible with Microsoft's Plug & Play (VESA DDC1/2B)

② Component video signal
Y ... 1 Vp-p/75 Ω/negative sync.
C_B/P_B, C_R/P_R
... 0.525 Vp-p/75 Ω
(75% saturation level)

Control

FACTORY ADJUSTMENT TERMINAL
... D-Sub 9 pin (pin connector)
CONTROL IN/OUT ... monaural mini jack (x2)

Accessories

Power cord 1
Pin/BNC conversion adaptor 1
Remote control unit 1
AA (LR6) batteries 2
Cleaning cloth 1
Speed clamp 2
Bead band 2
Warranty 1
Operating Instructions 1

● Due to improvements, specifications and design are subject to change without notice.